

From: [Swanson, Peter](#)
To: [Bury, Carolyn](#)
Cc: [Mike Pinto](#); [Mike.Bollinger@TRMI.Biz](#); [westje@dow.com](#); [QUACKENBUSHP@michigan.gov](#); [VERONAL@michigan.gov](#); [Canfield, David](#); [Project Email Filing](#)
Subject: Legacy Site Services - East Plant Area 17 Quarterly Monitoring Report - Q1 2014 -COR-018224-03-
Date: Monday, March 24, 2014 4:15:10 PM
Attachments: [018224 - Area 17 Quarterly Monitoring Report - Q1 2014.pdf](#)

Ms. Bury,

On behalf of Legacy Site Services LLC, agent of Arkema, please find the attached Area 17 Quarterly Monitoring Report for the first quarter of 2014. A hard copy of the report will follow by mail.

Regards,

Pete Swanson

Pete Swanson, P.E.
Conestoga-Rovers & Associates (CRA)
14496 Sheldon Road, Suite 200
Plymouth, MI 48170

Direct: 734.357.5507

Fax: 734.453.5201

Cell: 248.240.3213

Email: pswanson@CRAworld.com

www.CRAworld.com

Think before you print 

Perform every task the safe way, the right way, every time!

This communication and any accompanying document(s) are confidential and are intended for the sole use of the addressee. If you are not the intended recipient, please notify me at the telephone number shown above or by return e-mail and delete this e-mail and any copies. You are advised that any disclosure, copying, distribution, or the taking of any action in reliance upon the communication without consent is strictly prohibited. Thank you.



**CONESTOGA-ROVERS
& ASSOCIATES**

14496 Sheldon Road, Suite 200, Plymouth, MI 48170
Telephone: (734) 453-5123 Facsimile: (734) 453-5201
www.CRAworld.com

March 24, 2014

Reference No. 018224-03

Ms. Carolyn Bury
U.S. EPA Region 5
LU-9J
77 West Jackson Blvd
Chicago, IL 60604-3507

Dear Ms. Bury,

Re: Quarterly Monitoring Report – First Quarter 2014
Halowax Area (Area 17) Interim Remedial Measure
Arkema - East Plant
Wyandotte, Michigan

1.0 Introduction

On behalf of Legacy Site Services, LLC (LSS), Agent for Arkema Inc., Conestoga-Rovers & Associates, Inc. (CRA) has prepared this Halowax Area (Area 17) Interim Remedial Measure (IRM) Quarterly Monitoring Report in accordance with the United States Environmental Protection Agency (U.S. EPA)-approved Area 17 Quarterly Monitoring Plan (QMP), dated December 20, 2013.

In accordance with the approved QMP, 2014 quarterly events include hydraulic/DNAPL monitoring of eight shallow monitoring wells (IRM-MW-1, IRM-MW-2, IRM-MW-3, MW009, MW010A, MW011, MW016 and MW025) and sampling of six monitoring wells (IRM-MW-1, IRM-MW-2, IRM-MW-3, MW010A, MW016 and MW025). Refer to Figure 1 for the location of monitoring wells. Following the first year of sampling, the number of wells and frequency of sampling will be re-evaluated and, if warranted, modifications to the network and sampling frequency will be proposed.

The objective of quarterly sampling is to supplement the conclusions presented in the May 2010 Corrective measures Study (CMS) Report which indicates that the current Area 17 IRM effectively contains, captures, recovers and treats (or disposes) impacted groundwater and DNAPL prior to migration to the Trenton Channel. To achieve this objective, select monitoring wells throughout Area 17 are to be sampled and gauged on a quarterly basis to evaluate groundwater flow direction, DNAPL presence/thickness and dissolved constituent concentrations.

In accordance with the approved QMP, the remaining sections of this report are presented as follows:

- Section 2.0 - Field Activities
- Section 3.0 - Laboratory Analysis and Data Validation
- Section 4.0 - Groundwater Analytical Results
- Section 5.0 - Summary and Conclusions



2.0 Field Activities

2.1 Fluid (Groundwater and DNAPL) Level Monitoring

To start the event, static water levels (using an Oil/Water Interface Probe) were collected from all existing shallow monitoring wells in and near Area 17 to define flow conditions and investigate the presence of DNAPL. These wells included IRM-MW-1, IRM-MW-2, IRM-MW-3, MW009, MW010A, MW011, MW-016, and MW025, as depicted on Figure 1. Monitoring wells MW017 and MW022, shown on Figure 1, are damaged and were not sampled as part of this event.

Prior to collection of measurements, monitoring well caps were removed and time was given to promote water table equalization. The surface water level of the Trenton Channel was also obtained from data provided by the National Oceanic and Atmospheric Administration (NOAA) Wyandotte River Gauging Station (http://glakesonline.nos.noaa.gov/glin.shtml?station_info=9044030+Wyandotte+MI).

Fluid levels collected as part of this activity are summarized in the following table:

Well ID	TOC Elevation	Water Level (ft btoc)	Depth to DNAPL (ft btoc)	TOS (ft btoc)	BOS (ft btoc)	BOW (ft btoc)	Water Elev.	DNAPL Elev.	DNAPL Thickness (ft)
IRM-MW-1	580.02	6.31	ND	12.25	17.25	22.25	573.71	ND	NA
IRM-MW-2	579.57	7.51	15.02	11.52	16.52	21.52	572.06	564.55	6.5 ⁽¹⁾
IRM-MW-3	579.30	7.20	ND	11.31	16.31	21.31	572.10	ND	NA
MW009	579.57	5.43	14.64	11.14	16.14	16.14	574.14	564.93	1.5
MW010a	579.76	4.00	ND	6.52	11.52	11.52	575.76	ND	NA
MW011	580.66	4.74	ND	5.17	10.17	10.17	574.92	ND	NA
MW016	579.29	4.66	ND	17.25	22.25	22.25	574.63	ND	NA
MW025	581.11	8.96	ND	16.91	21.91	21.91	572.15	ND	NA
Surface Water ⁽²⁾	NA	NA	NA	NA	NA	NA	572.20	NA	NA

Elevation Datum - NAVD 88

TOC - Top of casing

ft btoc - feet below top of casing

NA - Not Applicable

TOS - approximate top of screen (feet below top of casing) based on field measurement with oil/water interface probe

BOS - approximate bottom of screen (feet below top of casing) based on field measurement with oil/water interface probe

BOW - approximate bottom of well (feet below top of casing) based on field measurement with oil/water interface probe

(1) - DNAPL thickness of 6.5 feet includes 5 feet that accumulated over time in the sump. Approximately 1.5 feet of DNAPL is present within the screened interval.

(2) - Based on Wyandotte, MI station reading at 9:48 A.M. on 1/30/14; converted from IGLD 85 to NAVD 88 elevation using -0.265ft conversion factor. Elevation is approximate.



Data presented in the table were used to develop groundwater flow contours and to document DNAPL conditions. As shown on Figure 1, groundwater was found to flow in an easterly direction at the time of the event, which is consistent with previous estimates of shallow groundwater flow in Area 17.

As shown in the above table, DNAPL was encountered in IRM-MW-2 and MW009 only. This is consistent with previous gauging events (DNAPL has only been observed in these two wells since initiation of RCRA Corrective Action Activities).

2.2 DNAPL Recovery

As part of this event, CRA extracted recoverable DNAPL prior to monitoring well development. A total of 2 gallons were recovered from MW-009 during the effort and placed in DNAPL waste drums which are staged adjacent to treatment system building. DNAPL present within IRM-MW-2 was highly viscous and could not be removed by pumping. DNAPL will be properly disposed along with other Area 17 groundwater treatment system O&M waste.

2.3 Monitoring Well Development

Due to the length of time since network monitoring wells were sampled, CRA developed each monitoring well to remove sediment from the screened intervals prior to sampling. Well development included removing approximately three well volumes of water with a submersible pump. During removal, CRA monitored turbidity. If turbidity stabilized and the screened intervals were free of sediment prior to removal of three well volumes, pumping was stopped. Additionally, if a well purged dry prior to removal of three well volumes, and did not recover at a sufficient rate, the well was considered ready for sampling upon recharge. All water generated during development was processed through the Area 17 groundwater treatment system.

2.4 Monitoring Well Sampling

Following development of IRM-MW-1, IRM-MW-2, IRM-MW-3, MW010A, MW016 and MW025, the wells were given 24 hours to recharge and sampling began in accordance with CRA's Field Method Guidelines (FMGs) for Groundwater Sample Purging and Collection Procedures. Tubing used for sampling was dedicated to each monitoring well to prevent potential cross-contamination, to eliminate decontamination of tubing and to facilitate follow-up sampling rounds. All water generated during well purging efforts was processed through the Area 17 groundwater treatment system.

During sampling, the water level and pumping rates were recorded every three to five minutes (or less, depending on the recharge rate of the monitoring well) and the groundwater was monitored with a flow-through cell for field parameters including dissolved oxygen (DO), oxidation reduction potential (ORP), pH, specific conductance, turbidity, and temperature. After the field parameters stabilized, groundwater samples were collected using laboratory-supplied glass containers, starting with VOCs. Field quality control samples were also collected during the sampling event and consisted of one trip



blank, one duplicate and one matrix spike/matrix spike duplicate (MS/MSD). Upon collection, samples were immediately placed in a cooler on ice for shipment to the analytical laboratory under chain-of-custody (COC) protocol. Refer to Attachment A for copies of Low Flow Purging Forms and Table 1 for a Sample Key.

3.0 Laboratory Analysis and Data Validation

Groundwater samples collected for chemical analysis were submitted to TestAmerica Laboratories under COC protocol and all samples were analyzed under standard turn-around time (two weeks) for Target Compound List (TCL) volatile organic compounds (VOCs) by SW846, Method 8260; TCL semi-volatile organic compounds (SVOCs) by SW846, Method 8270; and chromium and lead by SW846, Method 6010.

Quality Assurance/Quality Control (QA/QC) procedures were conducted by the laboratory during sample analyses. A review of the analytical data package was also performed to validate results and to determine usability. This validation was performed by project chemists experienced in laboratory methods and validation procedures, and did not include those persons directly involved with the analyses. The data validation was performed in general accordance with criteria established in federal guidelines. Refer to Attachment B for a memorandum describing Data Quality Assessment and Validation.

4.0 Groundwater Analytical Results

Results of the groundwater analyses are provided in the laboratory analytical reports contained in Attachment C and are summarized in Table 2. Analytical results presented in Table 2 are compared to Michigan Act 451, Part 201 Generic Nonresidential Cleanup Criteria (GNRCC). As shown, various constituents were detected above GRCC (criteria protective of the drinking water pathway or the groundwater-surface water interface [GSI], depending on the constituent) in IRM-MW-1, IRM-MW-2, IRM-MW-3 and MW010A. However, drinking water exceedances are mitigated through implementation of a restrictive covenant, which prohibits use of groundwater for drinking water purposes. With respect to the GSI exceedances, each of the listed wells is located such that detected constituents, if mobile, would migrate toward and be captured by the containment wall, thereby mitigating exceedances. As such, the drinking water and GSI pathways are not complete for those wells and the associated exceedances do not present unacceptable exposures.

No constituents were detected above applicable criteria in MW016. Additionally, with the exception of chlorobenzene (0.051 mg/l), slightly above GSI criteria (0.025 mg/l), no constituents were detected in MW025 at concentrations above applicable GNRCC.



5.0 Summary and Conclusions

CRA conducted first quarter 2014 monitoring of the Area 17 IRM in accordance with the U.S. EPA-approved QMP, dated December 20, 2013. Activities included hydraulic/DNAPL monitoring of eight shallow monitoring wells (IRM-MW-1, IRM-MW-2, IRM-MW-3, MW009, MW010A, MW011, MW016 and MW025) and sampling of six shallow monitoring wells (IRM-MW-1, IRM-MW-2, IRM-MW-3, MW010A, MW016 and MW025) to evaluate groundwater flow direction, DNAPL presence/thickness and dissolved constituent concentrations.

As identified herein, groundwater was found to flow in an easterly direction, which is consistent with previous estimates of shallow groundwater flow in Area 17 and provides evidence that Area 17 impacts will migrate toward the containment wall where they would be intercepted, extracted and treated.

DNAPL was encountered in IRM-MW-2 and MW009 only. This is consistent with previous gauging events and provides evidence that the DNAPL plume is stable (i.e., does not appear to be mobile or migrating). Cross-sectional diagrams were updated during preparation of the Quarterly Monitoring Report to reflect field measured monitoring well depths. Figures 2, 3 and 4 present updated cross-sectional diagrams of the Area 17 hydrogeologic profile and continue to show an easterly sloping clay layer. This provides evidence that, if present, mobile and migrating, DNAPL would flow along the top of the clay layer (dipping to the east – toward the containment wall) and be contained.

Results of the groundwater analyses show that various constituents were detected in IRM-MW-1, IRM-MW-2, IRM-MW-3 and MW010A. However, based on their location and institutional controls in place at the site, the constituents do not present unacceptable exposures.

No constituents were detected above applicable GNRCC in MW016. Additionally, with the exception of chlorobenzene (0.051 mg/l), slightly above GSI criteria (0.025 mg/l), no constituents were detected in MW025 at concentrations above GNRCC. If additional rounds of sampling confirm the MW025 results, further evaluation may be warranted to understand whether chlorobenzene is reaching the Trenton Channel at concentrations that may be significant.

We trust that this report satisfies your requirements at this time. If you should have any questions or comments or require further clarification, please contact Mr. Michael Pinto at (610) 594-4435.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

A handwritten signature in blue ink, appearing to read 'Peter S. Swanson', is written over a light blue horizontal line.

Peter S. Swanson, P.E.

PSS/DC/bw/2/Det.



**CONESTOGA-ROVERS
& ASSOCIATES**

March 24, 2014

6

Reference No. 018224-03

Encl: Figure 1 Site Layout and Groundwater Contours
Figure 2 Cross-Section Location Map
Figure 3 Cross-Section A-A'
Figure 4 Cross-Section B-B'

Table 1 Sample Key
Table 2 Summary of Groundwater Analytical Results

Attachment A Low Flow Purging Forms
Attachment B Data Quality Assessment and Validation Memorandum
Attachment C Laboratory Analytical reports

c.c.: Michael Pinto, LSS
Michael Bollinger, Beazer East
Joanne West, Union Carbide
Peter Quackenbush, MDEQ
Laura Verona, MDEQ
Dave Canfield, CRA

Figures

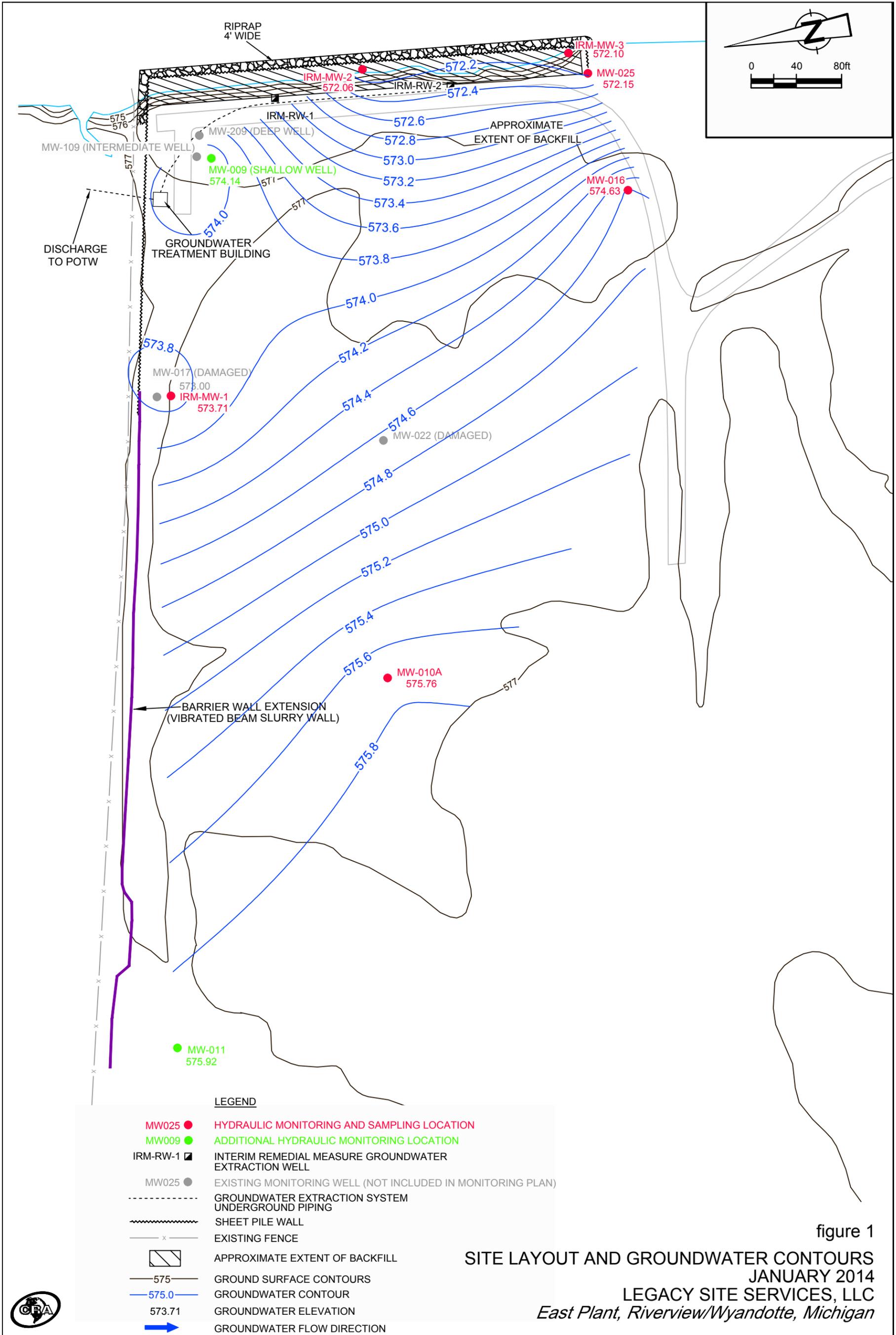


figure 1

SITE LAYOUT AND GROUNDWATER CONTOURS
JANUARY 2014
LEGACY SITE SERVICES, LLC
East Plant, Riverview/Wyandotte, Michigan

LEGEND

- MW025 **HYDRAULIC MONITORING AND SAMPLING LOCATION**
- MW009 **ADDITIONAL HYDRAULIC MONITORING LOCATION**
- IRM-RW-1 **INTERIM REMEDIAL MEASURE GROUNDWATER EXTRACTION WELL**
- MW025 **EXISTING MONITORING WELL (NOT INCLUDED IN MONITORING PLAN)**
- **GROUNDWATER EXTRACTION SYSTEM UNDERGROUND PIPING**
- ~~~~~ **SHEET PILE WALL**
- x - **EXISTING FENCE**
- APPROXIMATE EXTENT OF BACKFILL**
- 575— **GROUND SURFACE CONTOURS**
- 575.0— **GROUNDWATER CONTOUR**
- 573.71 **GROUNDWATER ELEVATION**
- ➔ **GROUNDWATER FLOW DIRECTION**



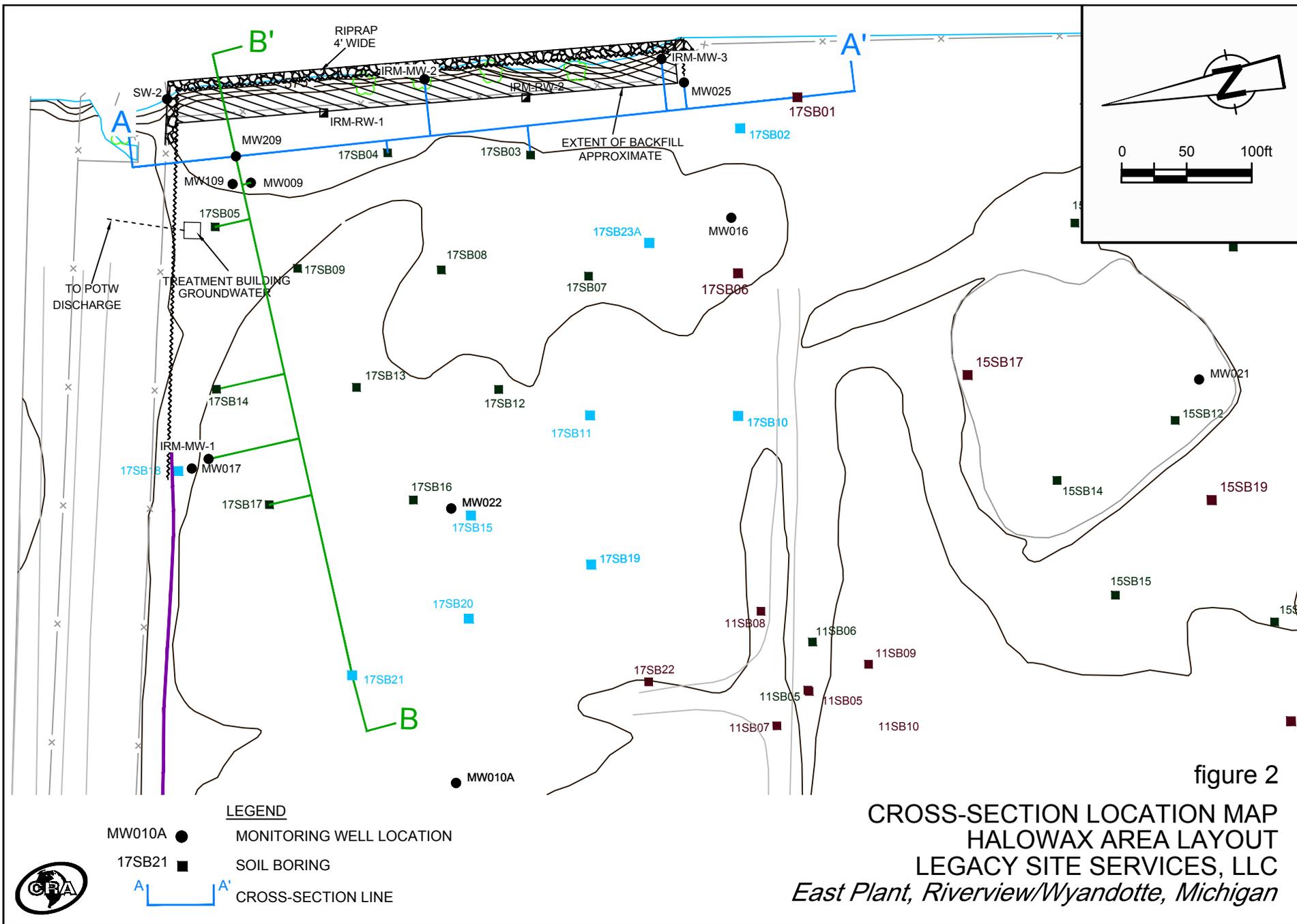


figure 2
CROSS-SECTION LOCATION MAP
HALOWAX AREA LAYOUT
LEGACY SITE SERVICES, LLC
East Plant, Riverview/Wyandotte, Michigan

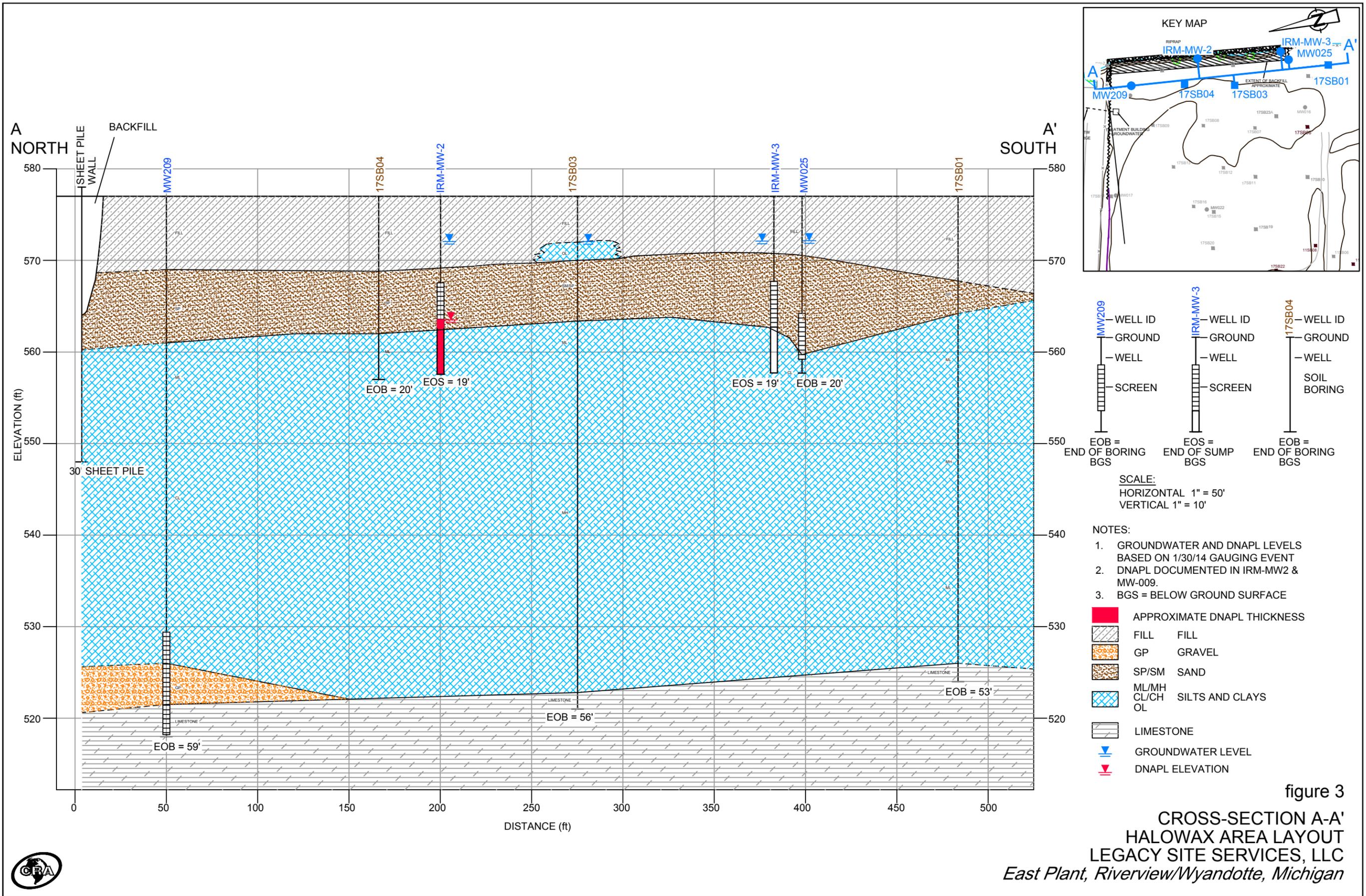


figure 3
CROSS-SECTION A-A'
HALOWAX AREA LAYOUT
LEGACY SITE SERVICES, LLC
East Plant, Riverview/Wyandotte, Michigan



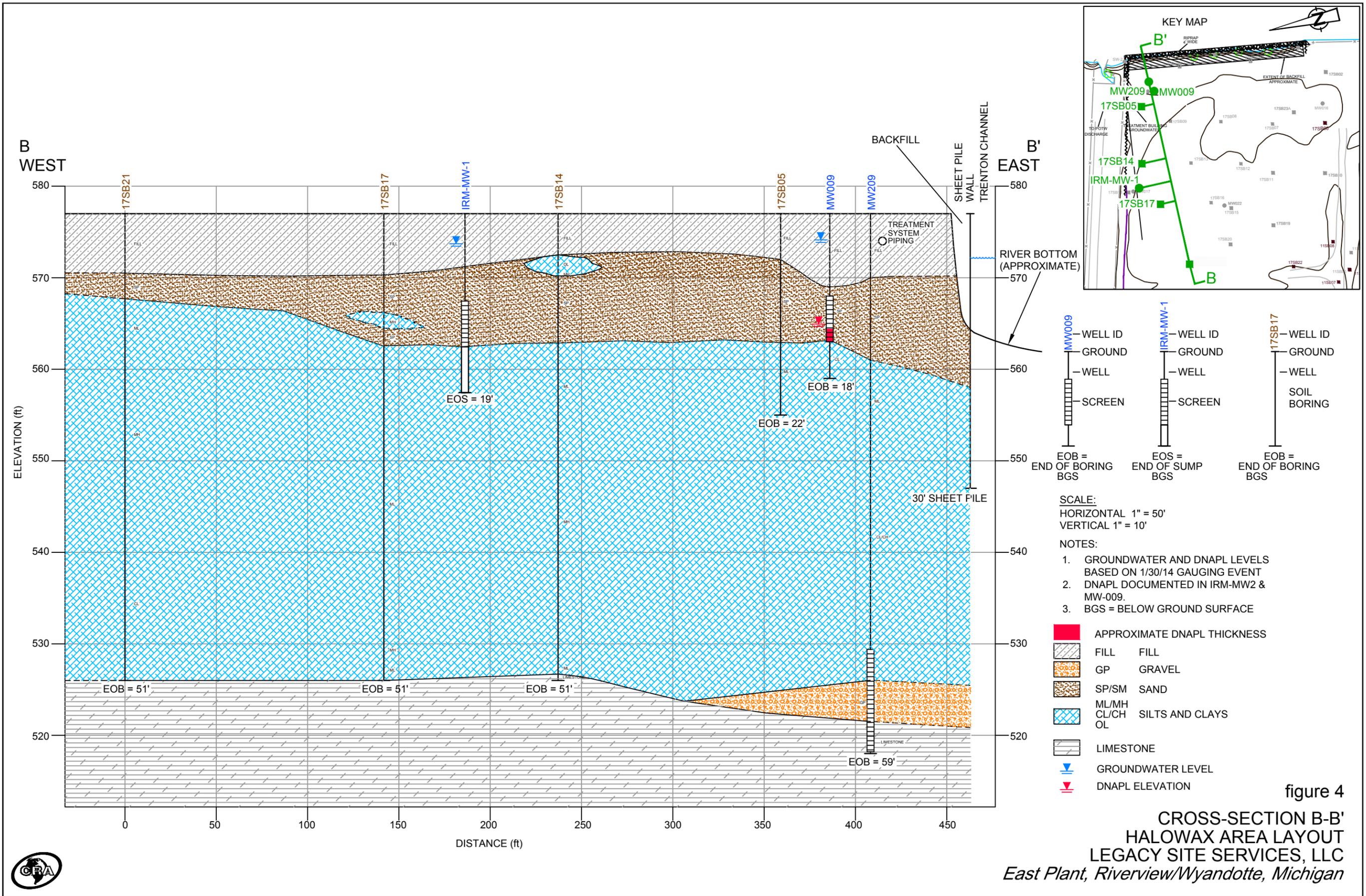


figure 4
CROSS-SECTION B-B'
HALOWAX AREA LAYOUT
LEGACY SITE SERVICES, LLC
East Plant, Riverview/Wyandotte, Michigan



Tables

TABLE 1
GROUNDWATER SAMPLE KEY
JANUARY 2014 QUARTERLY SAMPLING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE, MICHIGAN

<i>Sample Identification</i>	<i>Sample Location</i>	<i>Date</i>	<i>QA/QC</i>	<i>Analysis</i>
GW-18224-013114-SR-001	IRM-MW-1	1/13/2014	--	VOCs, SVOCs, Pb, Cr
GW-18224-013114-SR-002	IRM-MW-1	1/31/2014	Duplicate	VOCs, SVOCs, Pb, Cr
GW-18224-013114-SR-003	MW010A	1/31/2014	--	VOCs, SVOCs, Pb, Cr
GW-18224-013114-SR-004	MW016	1/31/2014	--	VOCs, SVOCs, Pb, Cr
GW-18224-013114-SR-005	MW025	1/31/2014	MS/MSD	VOCs, SVOCs, Pb, Cr
GW-18224-013114-SR-006	IRM-MW-3	1/31/2014	--	VOCs, SVOCs, Pb, Cr
GW-18224-013114-SR-007	IRM-MW-2	1/31/2014	--	VOCs, SVOCs, Pb, Cr
TB-18224-013114	--	1/31/2014	Trip Blank	VOCs

Notes:

VOCs = Volatile Organic Compounds

SVOCs = Semi-Volatile Organic Compounds

Pb = Lead

Cr = Chromium

MS/MSD = Matrix Spike/ Matrix Spike Duplicate

QA/QC = Quality Assurance/ Quality Control

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
JANUARY 2014 QUARTERLY SAMPLING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE, MICHIGAN

Sample Location: Sample Identification: Sample Date: Sample Type:	MDEQ Generic Groundwater Cleanup Criteria: Nonresidential ⁽¹⁾						IRM-MW-1 GW-18224-013114-SR-001 1/31/2014	IRM-MW-1 GW-18224-013114-SR-002 1/31/2014 Duplicate	IRM-MW-2 GW-18224-013114-SR-007 1/31/2014	IRM-MW-3 GW-18224-013114-SR-006 1/31/2014	MW010A GW-18224-013114-SR-003 1/31/2014	MW016 GW-18224-013114-SR-004 1/31/2014	MW025 GW-18224-013114-SR-005 1/31/2014
	Non-Residential Drinking Water	Groundwater Surface Water Interface	Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Water Solubility	Flammability and Explosivity Screening Levels								
Units	b	c	e	f	g								
Chromium , Total ⁽³⁾	mg/L	0.1	0.084	NLV	--	ID	0.0089	0.0083	0.005 U	0.005 U	0.005 U	0.036	0.011
Lead	mg/L	0.004	0.014	NLV	--	ID	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U	0.003 U
Semi-Volatile Organic Compounds (SVOCs)													
2,2'-Oxybis(1-chloropropane) (bis(2-Chloro	mg/L	--	--	--	--	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
2,4,5-Trichlorophenol	mg/L	2.1	--	NLV	1200	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
2,4,6-Trichlorophenol	mg/L	0.47	0.005	NLV	800	ID	0.0039 U	0.004 U	0.038 U	0.004 U	0.0038 U	0.0038 U	0.004 U
2,4-Dichlorophenol	mg/L	0.21	0.011	NLV	4500	ID	0.0098 U	0.01 U	0.096 U	0.0099 U	0.0096 U	0.0095 U	0.0099 U
2,4-Dimethylphenol	mg/L	1	0.38	NLV	7870	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
2,4-Dinitrophenol	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.19 U	0.02 U	0.019 U	0.019 U	0.02 U
2,4-Dinitrotoluene	mg/L	0.032	--	NLV	270	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
2,6-Dinitrotoluene	mg/L	--	--	--	--	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
2-Chloronaphthalene	mg/L	5.2	--	ID	6.74	ID	0.0049 U	0.0051 U	0.17	0.0062	0.0048 U	0.0048 U	0.005 U
2-Chlorophenol	mg/L	0.13	0.018	ID	22000	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
2-Methylnaphthalene	mg/L	0.75	0.019	25	24.6	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
2-Methylphenol	mg/L	1	0.03	NLV	28000	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
2-Nitroaniline	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.19 U	0.02 U	0.019 U	0.019 U	0.02 U
2-Nitrophenol	mg/L	0.058	ID	NLV	2500	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
3&4-Methylphenol	mg/L	1	0.03	NLV	28000	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
3,3'-Dichlorobenzidine	mg/L	0.0043	0.0003	NLV	3.11	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	R
3-Nitroaniline	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.19 U	0.02 U	0.019 U	0.019 U	0.02 U
4,6-Dinitro-2-methylphenol	mg/L	0.02	--	NLV	200	ID	0.02 U	0.02 U	0.19 U	0.02 U	0.019 U	0.019 U	0.02 U
4-Bromophenyl phenyl ether	mg/L	--	--	--	--	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
4-Chloro-3-methylphenol	mg/L	0.42	0.0074	NLV	3900	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
4-Chloroaniline	mg/L	--	--	--	--	--	0.0098 U	0.01 U	0.096 U	0.0099 U	0.0096 U	0.0095 U	0.0099 U
4-Chlorophenyl phenyl ether	mg/L	--	--	--	--	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
4-Methylphenol	mg/L	1	0.03	NLV	28000	--	--	--	--	--	--	--	--
4-Nitroaniline	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.19 U	0.02 U	0.019 U	0.019 U	0.02 U
4-Nitrophenol	mg/L	--	--	--	--	--	0.02 U	0.02 U	0.19 U	0.02 U	0.019 U	0.019 U	0.02 U
Acenaphthene	mg/L	3.8	0.038	4.2	4.24	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Acenaphthylene	mg/L	0.15	ID	3.9	3.93	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Acetophenone	mg/L	4.4	--	6100	6100	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Anthracene	mg/L	0.043	ID	0.043	0.0434	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Atrazine	mg/L	0.003	0.0073	70	70	ID	0.0029 U	0.003 U	0.029 U	0.003 U	0.0029 U	0.0029 U	0.003 U
Benzaldehyde	mg/L	--	--	--	--	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Benzo(a)anthracene	mg/L	0.0085	ID	NLV	0.0094	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	0.00099 U
Benzo(a)pyrene	mg/L	0.005	ID	NLV	0.00162	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	R
Benzo(b)fluoranthene	mg/L	0.0015	ID	ID	0.0015	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	R
Benzo(g,h,i)perylene	mg/L	0.001	--	NLV	0.00026	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	R
Benzo(k)fluoranthene	mg/L	0.001	--	NLV	0.0008	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	R
Biphenyl (1,1-Biphenyl)	mg/L	--	--	--	--	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
bis(2-Chloroethoxy)methane	mg/L	--	--	--	--	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
bis(2-Chloroethyl)ether	mg/L	0.0083	0.001	210	17200	17000	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	0.00099 U
bis(2-Ethylhexyl)phthalate (DEHP)	mg/L	0.006	0.025	NLV	0.34	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	R
Butyl benzylphthalate (BBP)	mg/L	2.7	0.067	NLV	2.69	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Caprolactam	mg/L	17	--	NLV	5250000	--	0.0098 U	0.01 U	0.096 U	0.0099 U	0.0096 U	0.0095 U	0.0099 U
Carbazole	mg/L	0.35	0.01	NLV	7.48	ID	0.0098 U	0.01 U	0.096 U	0.0099 U	0.0096 U	0.0095 U	0.0099 U
Chrysene	mg/L	0.0016	ID	ID	0.0016	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	0.00099 U
Dibenz(a,h)anthracene	mg/L	0.002	ID	NLV	0.00249	ID	0.002 U	0.002 U	0.019 U	0.002 U	0.0019 U	0.0019 U	R
Dibenzofuran	mg/L	ID	0.004	10	10	ID	0.0039 U	0.004 U	0.038 U	0.004 U	0.0038 U	0.0038 U	0.004 U
Diethyl phthalate	mg/L	16	0.11	NLV	1080	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Dimethyl phthalate	mg/L	210	--	NLV	4190	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Di-n-butylphthalate (DBP)	mg/L	2.5	0.0097	NLV	11.2	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Di-n-octyl phthalate (DnOP)	mg/L	0.38	ID	NLV	3	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	R
Fluoranthene	mg/L	0.21	0.0016	0.21	0.206	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	0.00099 U
Fluorene	mg/L	2	0.012	2	1.98	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Hexachlorobenzene	mg/L	0.001	0.0002	3	6.2	ID	0.0002 U	0.0002 U	0.0019 U	0.0002 U	0.00019 U	0.00019 U	0.0002 U
Hexachlorobutadiene	mg/L	0.042	0.00053	3.2	3.23	ID	0.00098 U	0.001 U	0.0096 U	0.00099 U	0.00096 U	0.00095 U	0.00099 U
Hexachlorocyclopentadiene	mg/L	0.05	ID	0.42	1.8	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Hexachloroethane	mg/L	0.021	0.0067	50	50	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Indeno(1,2,3-cd)pyrene	mg/L	0.002	ID	NLV	0.000022	ID	0.002 U	0.002 U	0.019 U	0.002 U	0.0019 U	0.0019 U	R
Isophorone	mg/L	3.1	1.3	NLV	12000	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Naphthalene	mg/L	1.5	0.011	31	31	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Nitrobenzene	mg/L	0.0096	0.18	550	2090	--	0.0029 U	0.003 U	0.029 U	0.003 U	0.0029 U	0.0029 U	0.003 U
N-Nitrosodi-n-propylamine	mg/L	0.005	--	NLV	9890	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
N-Nitrosodiphenylamine	mg/L	1.1	--	NLV	35.1	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Pentachlorophenol	mg/L	0.001	0.0018	NLV	1850	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Phenanthrene	mg/L	0.15	0.002	1	1	ID	0.002 U	0.002 U	0.019 U	0.002 U	0.0019 U	0.0019 U	0.002 U
Phenol	mg/L	13	0.45	NLV	82800	--	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U
Pyrene	mg/L	0.14	ID	0.14	0.135	ID	0.0049 U	0.0051 U	0.048 U	0.005 U	0.0048 U	0.0048 U	0.005 U

**TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
JANUARY 2014 QUARTERLY SAMPLING EVENT
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE, MICHIGAN**

Sample Location: Sample Identification: Sample Date: Sample Type:	MDEQ Generic Groundwater Cleanup Criteria: Nonresidential ⁽¹⁾						IRM-MW-1 GW-18224-013114-SR-001 1/31/2014	IRM-MW-1 GW-18224-013114-SR-002 1/31/2014 Duplicate	IRM-MW-2 GW-18224-013114-SR-007 1/31/2014	IRM-MW-3 GW-18224-013114-SR-006 1/31/2014	MW010A GW-18224-013114-SR-003 1/31/2014	MW016 GW-18224-013114-SR-004 1/31/2014	MW025 GW-18224-013114-SR-005 1/31/2014
	Non-Residential Drinking Water	Groundwater Surface Water Interface	Non-Residential Groundwater Volatilization to Indoor Air Inhalation	Water Solubility	Flammability and Explosivity	Screening Levels							
Units	b	c	e	f	g								
Volatile Organic Compounds (VOC)													
1,1,1-Trichloroethane	mg/L	0.2	0.089	1300	1330	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,1,2,2-Tetrachloroethane	mg/L	0.035	0.078	77	2970	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,1,2-Trichloroethane	mg/L	0.005	0.33	110	4420	--	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,1-Dichloroethane	mg/L	2.5	0.74	2300	5060	380	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,1-Dichloroethene	mg/L	0.007	0.13	1.3	2250	97	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,2,4-Trichlorobenzene	mg/L	0.07	0.099	300	300	--	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,2-Dibromo-3-chloropropane (DBCP)	mg/L	0.0002	--	1.2	1.23	--	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,2-Dibromoethane (Ethylene dibromide)	mg/L	0.00005	0.0057	15	4200	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,2-Dichlorobenzene	mg/L	0.6	0.013	160	156	--	0.067 U	0.067 U	0.043 ^c	0.011	0.005 U	0.004 U	0.0044
1,2-Dichloroethane	mg/L	0.005	0.36	59	8520	2500	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,2-Dichloropropane	mg/L	0.005	0.23	36	2800	550	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
1,3-Dichlorobenzene	mg/L	0.019	0.028	41	111	ID	0.067 U	0.067 U	0.053 ^{bc}	0.011	0.005 U	0.004 U	0.004 U
1,4-Dichlorobenzene	mg/L	0.075	0.017	74	73.8	--	0.067 U	0.067 U	0.22 ^{bc}	0.018 ^c	0.005 U	0.004 U	0.01
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	38	2.2	240000	240000	ID	0.67 U	0.67 U	0.2 U	0.067 U	0.05 U	0.04 U	0.04 U
2-Hexanone	mg/L	2.9	ID	8700	16000	--	0.67 U	0.67 U	0.2 U	0.067 U	0.05 U	0.04 U	0.04 U
4-Methyl-2-pentanone (Methyl isobutyl ke	mg/L	5.2	ID	20000	20000	ID	0.67 U	0.67 U	0.2 U	0.067 U	0.05 U	0.04 U	0.04 U
Acetone	mg/L	2.1	1.7	1000000	1000000	15000	0.67 U	0.67 U	0.2 U	0.067 U	0.05 U	0.04 U	0.04 U
Benzene	mg/L	0.005	0.2	35	1750	68	0.067 U	0.067 U	0.36 ^{bc}	0.012 ^b	0.005 U	0.004 U	0.004 U
Bromodichloromethane	mg/L	0.08	ID	37	6740	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Bromoform	mg/L	0.08	ID	3100	3100	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Bromomethane (Methyl bromide)	mg/L	0.029	0.035	9	14500	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Carbon disulfide	mg/L	2.3	ID	550	1190	13	0.33 U	0.33 U	0.1 U	0.033 U	0.025 U	0.02 U	0.02 U
Carbon tetrachloride	mg/L	0.005	0.045	2.4	793	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Chlorobenzene	mg/L	0.1	0.025	470	472	160	0.067 U	0.067 U	0.69 ^{bc}	0.24 ^{bc}	0.005 U	0.004 U	0.051 ^c
Chloroethane	mg/L	1.7	1.1	5700	5740	110	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.072	0.004 U
Chloroform (Trichloromethane)	mg/L	0.08	0.35	180	7920	ID	2.6 ^{bc}	2.6 ^{bc}	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Chloromethane (Methyl chloride)	mg/L	1.1	ID	45	6340	36	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
cis-1,2-Dichloroethene	mg/L	0.07	0.62	210	3500	530	0.067 U	0.067 U	0.02 U	0.0067 U	0.17 ^b	0.004 U	0.004 U
cis-1,3-Dichloropropene	mg/L	--	--	--	--	--	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Cyclohexane	mg/L	--	--	--	--	--	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Dibromochloromethane	mg/L	0.08	ID	110	2600	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Dichlorodifluoromethane (CFC-12)	mg/L	4.8	ID	300	300	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Ethylbenzene	mg/L	0.074	0.018	170	169	43	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Isopropyl benzene	mg/L	2.3	0.028	56	56	29	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Methyl acetate	mg/L	--	--	--	--	--	0.67 U	0.67 U	0.2 U	0.067 U	0.05 U	0.04 U	0.04 U
Methyl cyclohexane	mg/L	--	--	--	--	--	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Methyl tert butyl ether (MTBE)	mg/L	0.04	7.1	47000	46800	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Methylene chloride	mg/L	0.005	1.5	1400	17000	ID	0.33 U	0.33 U	0.1 U	0.033 U	0.025 U	0.02 U	0.02 U
Styrene	mg/L	0.1	0.08	310	310	140	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Tetrachloroethene	mg/L	0.005	0.06	170	200	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.018 ^b	0.004 U	0.004 U
Toluene	mg/L	0.79	0.27	530	526	61	0.067 U	0.067 U	0.32 ^c	0.0067 U	0.005 U	0.004 U	0.004 U
trans-1,2-Dichloroethene	mg/L	0.1	1.5	200	6300	230	0.067 U	0.067 U	0.02 U	0.0067 U	0.1	0.004 U	0.004 U
trans-1,3-Dichloropropene	mg/L	--	--	--	--	--	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Trichloroethene	mg/L	0.005	0.2	4.9	1100	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.088 ^b	0.004 U	0.004 U
Trichlorofluoromethane (CFC-11)	mg/L	7.3	--	1100	1100	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.005 U	0.004 U	0.004 U
Trifluorotrchloroethane (Freon 113)	mg/L	170	0.032	170	170	ID	0.067 U	0.067 U	0.02 U	0.0067 U	0.0062	0.004 U	0.004 U
Vinyl chloride	mg/L	0.002	0.013	13	2760	33	0.067 U	0.067 U	0.02 U	0.0067 U	0.026 ^{bc}	0.004 U	0.004 U
Xylenes (total)	mg/L	0.28	0.041	190	186	70	0.13 U	0.13 U	0.04 U	0.013 U	0.01 U	0.008 U	0.008 U

Notes:
 (1) MDEQ (Michigan) Generic groundwater cleanup criteria, administrative rule R 299.44 effective December 30, 2013, pursuant to Part 201 of 1994 PA 451 as amended (Part 201 Groundwater Criteria)
 (2) The December 20, 2013 Quarterly Monitoring Plan accounted for both total and dissolved metals analysis. However, turbidity stabilized below 10 NTU in each well. As such, field filtering was not deemed warranted and only total metals were analyzed.
 (3) Criteria for chromium assumes chromium III (Cr III). Cr VI has not been a constituent of concern on Site. The Criteria for Chromium VI is 0.011 mg/L, which is exceeded in MW016 only.
 mg/L - milligrams per liter (parts per million)
 U - Not detected at the associated reporting limit.
 # - The reported concentration may be either 3-methylphenol and/or 4-methylphenol.
 B - Laboratory qualifier: Method blank contamination. The associated method blank contains the target analyte at a reportable level
 J - Estimated concentration.
 UJ - Not detected; associated reporting limit is estimated.
 R - Rejected.

Attachment A

Low-Flow Purging Record Forms

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

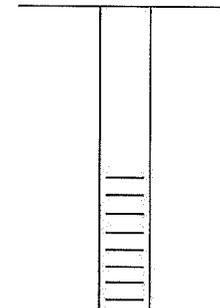
Project Name: ARREMA - HALOWAN AREA
 Ref. No.: 018224

Date: JANUARY 31, 2014
 Personnel: STEVE RAPAI

Monitoring Well Data:

Well No.: IRM - MW 1
 Vapour PID (ppm): NO
 Measurement Point: Top of Casing
 Constructed Well Depth (m/ft): _____
 Measured Well Depth (m/ft): 22.25
 Depth of Sediment (m/ft): -

Saturated Screen Length (m/ft): 5.25 5
 Depth to Pump Intake (m/ft)⁽¹⁾: 15.25
 Well Diameter, D (cm/in): 2
 Well Screen Volume, V_s (L)⁽²⁾: .8 gallons
 Initial Depth to Water (m/ft): 5.35



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
------	-----------------------	-----------------------	---	----------------	----------------------	---------------	-----------	----	----------	-----------------------------------	--

Precision Required⁽⁵⁾: ±3 % ±0.005 or 0.01⁽⁶⁾ ±10 % ±10 % ±0.1 Units ±10 mV

9:40	100	5.35									
10:00	100	5.49		6.41	1.69	10.5	4.52	7.16	10		
10:10	100	5.46		6.14	1.67	10.0	3.59	6.81	6		
10:15	100	5.46		6.03	1.65	9.82	3.90	6.76	7		
10:20	100	5.47		5.91	1.66	10.0	3.57	6.74	9		
10:25	100	5.47		5.86	1.65	9.68	3.51	6.72	11		
10:30	100	5.47		5.92	1.66	9.05	3.40	6.71	13		
10:35	100	5.47		6.07	1.66	8.92	3.35	6.70	16		
10:45	100	5.47		6.00	1.65	9.02	3.39	6.70	20		
10:55	100	5.47		6.21	1.65	6.24	3.18	6.69	24		
11:00	100	5.47		6.40	1.66	6.51	3.14	6.69	26		
11:05	100	5.47		6.54	1.65	6.47	3.14	6.68	27		

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where $r = (D/2)$ and L are in cm. For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

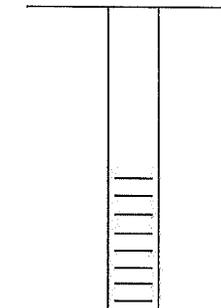
Project Name: Arkema Malbasx Area
 Ref. No.: 018224

Date: 1/31/14
 Personnel: O. Canfield

Monitoring Well Data:

Well No.: ILM-AW-2
 Vapour PID (ppm): NO
 Measurement Point: Top of casing
 Constructed Well Depth (m/ft): _____
 Measured Well Depth (m/ft): 21.52
 Depth of Sediment (m/ft): -

Saturated Screen Length (m/ft): 5
 Depth to Pump Intake (m/ft)⁽¹⁾: 14
 Well Diameter, D (cm/in): 2"
 Well Screen Volume, V_s (L)⁽²⁾: 1.8 yellow
 Initial Depth to Water (m/ft): 3.42



Start: 12:20

Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		

14:55	100	7.86		5.31	4.19	5.64	0.56	7.34	-251		
15:00	↓	↓		5.21	4.10	4.86	0.46	7.28	-248		
15:05	↓	↓		5.15	4.04	4.25	0.42	7.26	-247		
15:10	↓	↓		5.13	4.00	3.91	0.39	7.24	-249		
15:15	↓	↓		5.10	4.05	3.14	0.37	7.23	-247		

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

Sample: GW-18224-013114-S2-007
 @ 15:15

-5.5 ft of NAPL on oil/water probe

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: ARKEYA-HALOWAX AREA
 Ref. No.: 018224

Date: JAN. 31, 2014
 Personnel: STEVE RAPA

Monitoring Well Data:

Well No.: MW-3
 Vapour PID (ppm): NP
 Measurement Point: Top of Casing
 Saturated Screen Length (m/ft): 5
 Depth to Pump Intake (m/ft)⁽¹⁾: 13.5
 Well Diameter, D (cm/in): 2"
 Well Screen Volume, V_s (L)⁽²⁾: 8 screen
 Initial Depth to Water (m/ft): 7.15
 Constructed Well Depth (m/ft): _____
 Measured Well Depth (m/ft): 21.31
 Depth of Sediment (m/ft): -



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
------	-----------------------	-----------------------	---	----------------	----------------------	---------------	-----------	----	----------	-----------------------------------	--

Precision Required⁽⁵⁾: ±3% ±0.005 or 0.01⁽⁶⁾ ±10% ±10% ±0.1 Units ±10 mV

1415	100	7.16									
1435	100	7.18		6.73	9.15	30.1	1.66	7.51	-283		
1445	100	7.18		7.12	9.07	26.3	0.40	7.42	-318		
1455	100	7.18		7.00	9.10	21.2	0.34	7.41	-331		
1505	100	7.19		7.61	9.11	17.8	0.29	7.41	-340		
1515	100	7.19		7.63	9.12	14.2	0.30	7.40	-351		
1530	100	7.19		7.57	9.12	12.6	0.28	7.40	-353		
1540	100	7.20		7.62	9.11	6.64	0.27	7.39	-354		
1550	100	7.20		7.63	9.10	4.89	0.27	7.39	-356		

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi \cdot (r^2) \cdot L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s = \pi \cdot (r^2) \cdot L \cdot (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Arkema Halifax Area
 Ref. No.: 019224

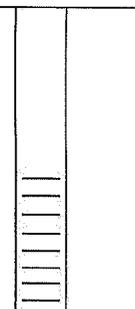
Date: 1/21/14
 Personnel: D. Confield

Monitoring Well Data:

Well No.: MW010A
 Vapour PID (ppm): ND
 Measurement Point: Top of casing
 Constructed Well Depth (m/ft): _____
 Measured Well Depth (m/ft): 11.52
 Depth of Sediment (m/ft): -

Saturated Screen Length (m/ft): 5
 Depth to Pump Intake (m/ft)⁽¹⁾: 9
 Well Diameter, D (cm/in): 2"
 Well Screen Volume, V_s (L)⁽²⁾: 8 yellow
 Initial Depth to Water (m/ft): 4.30

Start: 9:50



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
------	-----------------------	-----------------------	---	----------------	----------------------	---------------	-----------	----	----------	-----------------------------------	--

Precision Required⁽⁵⁾: ±3 % ±0.005 or 0.01⁽⁶⁾ ±10 % ±10 % ±0.1 Units ±10 mV

10:15	100	5.00		5.97	3.44	167	1.28	7.19	-209		
10:20				5.95	3.44	118	1.12	7.05	-212		
10:25				6.03	3.36	9.6	1.00	6.98	-219		
10:30				6.06	3.32	7.01	0.89	6.94	-224		
10:35				6.18	3.29	5.94	0.81	6.90	-226		
10:40				6.16	3.26	3.87	0.74	6.88	-229		
10:45				6.17	3.24	3.45	0.72	6.86	-232		
10:50				6.11	3.20	2.38	0.68	6.85	-231		

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, V_s=π*(r²)*L in mL, where r (r=D/2) and L are in cm. For Imperial units, V_s=π*(r²)*L*(2.54)³, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

Sample: GL-18224-013114-S2-003

@ 16:50

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

Project Name: Arkona Harbour Area
 Ref. No.: 210224

Date: 1/31/14
 Personnel: D. Canfield

Monitoring Well Data:

Well No.: MW016
 Vapour PID (ppm): ND
 Measurement Point: Top of casing
 Constructed Well Depth (m/ft): _____
 Measured Well Depth (m/ft): 22.25
 Depth of Sediment (m/ft): -

Saturated Screen Length (m/ft): 5
 Depth to Pump Intake (m/ft)⁽¹⁾: 19
 Well Diameter, D (cm/in): 2"
 Well Screen Volume, V_s (L)⁽²⁾: 8 gallons
 Initial Depth to Water (m/ft): 4.86

Start: 11:20



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
			Precision Required ⁽⁵⁾ :	±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		

11:50	50	8.01		9.36	18.7	21.6	0.34	8.46	-348		
11:55				9.20	18.6	17.6	0.31	8.52	-358		
12:00				9.42	17.8	15.6	0.27	8.63	-369		
12:10				9.59	16.8	15.4	0.26	8.73	-378		
12:15				9.31	16.6	12.2	0.24	8.79	-381		
12:30				9.17	15.8	9.28	0.23	8.92	-387		
12:35				9.11	15.7	9.06	0.22	8.95	-389		
12:40				9.11	15.7	8.47	0.22	8.99	-391		
12:45				9.17	15.7	7.20	0.22	9.02	-394		
12:50				9.24	15.6	7.14	0.22	9.03	-396		
12:55				9.49	15.6	6.73	0.21	9.05	-398		
13:05				9.13	15.3	6.32	0.21	9.06	-398		
13:10				9.21	15.2	6.67	0.21	9.06	-397		

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, $V_s = \pi r^2 (r^2) L$ in mL, where r (r=D/2) and L are in cm. For Imperial units, $V_s = \pi r^2 (r^2) L * (2.54)^3$, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

Samples CW 18224-013114-52-001

@ 13:10

- Read, rusty water

MONITORING WELL RECORD FOR LOW-FLOW PURGING

Project Data:

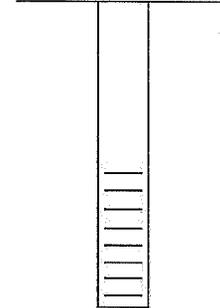
Project Name: ARREMA-HALOWAX AREA
 Ref. No.: 18224

Date: JAN. 31, 2014
 Personnel: _____

Monitoring Well Data:

Well No.: MW-25
 Vapour PID (ppm): NO
 Measurement Point: Top of casing
 Constructed Well Depth (m/ft): _____
 Measured Well Depth (m/ft): 21.91
 Depth of Sediment (m/ft): -

Saturated Screen Length (m/ft): 5
 Depth to Pump Intake (m/ft)⁽¹⁾: 18.15 19.5
 Well Diameter, D (cm/in): 2"
 Well Screen Volume, V_s (L)⁽²⁾: 8 gallons
 Initial Depth to Water (m/ft): 8.87



Time	Pumping Rate (mL/min)	Depth to Water (m/ft)	Drawdown from Initial Water Level ⁽³⁾ (m/ft)	Temperature °C	Conductivity (mS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)	Volume Purged, V _p (L)	No. of Well Screen Volumes Purged ⁽⁴⁾
Precision Required ⁽⁵⁾ :				±3 %	±0.005 or 0.01 ⁽⁶⁾	±10 %	±10 %	±0.1 Units	±10 mV		

1210	150	8.87									
1230	150	8.87		8.25	13.17	29.1	2.80	7.46	-274		
1240	150	8.87		8.50	13.41	17.8	0.40	7.05	-348		
1250	200	8.88		9.32	12.96	15.3	0.34	7.07	-350		
1300	200	8.88		9.50	12.73	10.9	0.32	7.10	-353		
1310	200	8.88		9.53	12.57	8.90	0.31	7.04	-357		
PURGE INTERRUPTED - BATTERY ON SAMPLE PUMP DIED								-0.29	7.19		
1330	200	8.88		9.52	12.48	7.96	0.29	7.19	-360		
1340	200	8.88		9.52	12.49	6.28	0.29	7.15	-357		

Notes:

- (1) The pump intake will be placed at the well screen mid-point or at a minimum of 0.6 m (2 ft) above any sediment accumulated at the well bottom.
- (2) The well screen volume will be based on a 1.52 metres (5-foot) screen length (L). For metric units, V_s=π*(r²)*L in mL, where r (r=D/2) and L are in cm. For Imperial units, V_s=π*(r²)*L* (2.54)³, where r and L are in inches
- (3) The drawdown from the initial water level should not exceed 0.1 m (0.3 ft). The pumping rate should not exceed 600 mL/min.
- (4) Purging will continue until stabilization is achieved or until 20 well screen volumes have been purged (unless purge water remains visually turbid and appears to be clearing, or unless stabilization parameters are varying slightly outside of the stabilization criteria and appear to be

005

Attachment B

Data Quality Assessment and Validation Memorandum



MEMORANDUM

TO: Pete Swanson
FROM: Nancy Bergstrom/tl/13/Det *eff*
RE: Analytical Results and Reduced Validation
Quarterly Monitoring
Arkema East Plant – Halowax Area
Wyandotte/Riverview, Michigan
January 2014

REF. NO.: 018224
DATE: February 28, 2014

1.0 Introduction

The following document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Monitoring at the Arkema East Plant – Halowax Area during January 2014. Samples were submitted to TestAmerica Laboratories, Inc., located in North Canton, Ohio. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

- i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999
- ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94-013, February 1994

Items i), and ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (4 +/- 2°C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compound (VOC) and semivolatile organic compound (SVOC) determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and/or analysis.

Each individual surrogate compound is expected to meet the laboratory (method) control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5.0 Laboratory Control Sample Analyses

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

For this study, LCS were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS contained all compounds of interest. Several VOC analytes were recovered above the acceptance criteria. These analytes were not detected in the associated investigative samples and qualification was not required. All remaining LCS were within the laboratory control limits, demonstrating acceptable analytical accuracy.

Inorganic Analyses

The LCS contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". All LCS recoveries were within the control limits, demonstrating acceptable analytical accuracy.

6.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. Table 4 presents the data qualified due to outlying MS/MSD results. All remaining percent recoveries and RPD values were within the laboratory control limits or did not require qualification, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". All percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision.

7.0 Field QA/QC Samples

The field QA/QC consisted of one trip blank sample and one field duplicate sample set.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, one trip blank sample was submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent for water samples. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criterion is one time the PQL value for water samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

8.0 Analyte Reporting

The laboratory reported detected results down to the laboratory's practical quantitation limit (PQL) for each analyte. No positive analyte detections less than the PQL but greater than the method detection limit (MDL) were reported. Non-detect results were presented as non-detect at the PQL in Table 2.

9.0 Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Tables 1 through 4 are acceptable with the specific exceptions noted herein.

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY
 QUARTERLY MONITORING
 ARKEMA EAST PLANT - HALOWAX AREA
 WYANDOTTE/RIVERVIEW, MICHIGAN
 JANUARY 2014**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters										Comments
					TCL VOC	TCL SVOC	Chromium and Lead								
GW-18224-013114-SR-001	IRM-MW-1	water	1/31/2014	11:10	X	X	X	--	--	--	--	--	--	--	
GW-18224-013114-SR-002	IRM-MW-1	water	1/31/2014	11:10	X	X	X	--	--	--	--	--	--	--	Field Duplicate of IRM-MW-1
GW-18224-013114-SR-003	MW010A	water	1/31/2014	10:50	X	X	X	--	--	--	--	--	--	--	
GW-18224-013114-SR-004	MW016	water	1/31/2014	13:10	X	X	X	--	--	--	--	--	--	--	
GW-18224-013114-SR-005	MW025	water	1/31/2014	13:45	X	X	X	--	--	--	--	--	--	--	MS/MSD
GW-18224-013114-SR-006	IRM-MW-3	water	1/31/2014	15:50	X	X	X	--	--	--	--	--	--	--	
GW-18224-013114-SR-007	IRM-MW-2	water	1/31/2014	15:15	X	X	X	--	--	--	--	--	--	--	
TB-18224-013114	--	water	1/31/2014	1/31/2014	X	--	--	--	--	--	--	--	--	--	Trip Blank

Notes:

- MS/MSD - Matrix Spike/Matrix Spike Duplicate
- TCL - Target Compound List
- VOC - Volatile Organic Compounds
- SVOC - Semivolatile Organic Compounds

**VALIDATED ANALYTICAL RESULTS SUMMARY
 QUARTERLY MONITORING
 ARKEMA EAST PLANT - HALOWAX AREA
 WYANDOTTE/RIVERVIEW, MICHIGAN
 JANUARY 2014**

<i>Sample Location:</i>	<i>IRM-MW-1</i>	<i>IRM-MW-1</i>	<i>IRM-MW-2</i>	
<i>Sample ID:</i>	<i>GW-18224-013114-SR-001</i>	<i>GW-18224-013114-SR-002</i>	<i>GW-18224-013114-SR-007</i>	
<i>Sample Date:</i>	<i>1/31/2014</i>	<i>1/31/2014</i> <i>Duplicate</i>	<i>1/31/2014</i>	
<i>Parameter</i>	<i>Units</i>			
<i>Volatile Organic Compounds</i>				
1,1,1-Trichloroethane	ug/L	67 U	67 U	20 U
1,1,2,2-Tetrachloroethane	ug/L	67 U	67 U	20 U
1,1,2-Trichloroethane	ug/L	67 U	67 U	20 U
1,1-Dichloroethane	ug/L	67 U	67 U	20 U
1,1-Dichloroethene	ug/L	67 U	67 U	20 U
1,2,4-Trichlorobenzene	ug/L	67 U	67 U	20 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	67 U	67 U	20 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	67 U	67 U	20 U
1,2-Dichlorobenzene	ug/L	67 U	67 U	43
1,2-Dichloroethane	ug/L	67 U	67 U	20 U
1,2-Dichloropropane	ug/L	67 U	67 U	20 U
1,3-Dichlorobenzene	ug/L	67 U	67 U	53
1,4-Dichlorobenzene	ug/L	67 U	67 U	220
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	670 U	670 U	200 U
2-Hexanone	ug/L	670 U	670 U	200 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	670 U	670 U	200 U
Acetone	ug/L	670 U	670 U	200 U
Benzene	ug/L	67 U	67 U	360
Bromodichloromethane	ug/L	67 U	67 U	20 U
Bromoform	ug/L	67 U	67 U	20 U
Bromomethane (Methyl bromide)	ug/L	67 U	67 U	20 U
Carbon disulfide	ug/L	330 U	330 U	100 U
Carbon tetrachloride	ug/L	67 U	67 U	20 U
Chlorobenzene	ug/L	67 U	67 U	690
Chloroethane	ug/L	67 U	67 U	20 U
Chloroform (Trichloromethane)	ug/L	2600	2600	20 U
Chloromethane (Methyl chloride)	ug/L	67 U	67 U	20 U
cis-1,2-Dichloroethene	ug/L	67 U	67 U	20 U
cis-1,3-Dichloropropene	ug/L	67 U	67 U	20 U
Cyclohexane	ug/L	67 U	67 U	20 U
Dibromochloromethane	ug/L	67 U	67 U	20 U

**VALIDATED ANALYTICAL RESULTS SUMMARY
QUARTERLY MONITORING
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
JANUARY 2014**

<i>Sample Location:</i>	<i>IRM-MW-1</i>	<i>IRM-MW-1</i>	<i>IRM-MW-2</i>	
<i>Sample ID:</i>	<i>GW-18224-013114-SR-001</i>	<i>GW-18224-013114-SR-002</i>	<i>GW-18224-013114-SR-007</i>	
<i>Sample Date:</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	
<i>Parameter</i>	<i>Units</i>	<i>Duplicate</i>		
Dichlorodifluoromethane (CFC-12)	ug/L	67 U	67 U	20 U
Ethylbenzene	ug/L	67 U	67 U	20 U
Isopropyl benzene	ug/L	67 U	67 U	20 U
Methyl acetate	ug/L	670 U	670 U	200 U
Methyl cyclohexane	ug/L	67 U	67 U	20 U
Methyl tert butyl ether (MTBE)	ug/L	67 U	67 U	20 U
Methylene chloride	ug/L	330 U	330 U	100 U
Styrene	ug/L	67 U	67 U	20 U
Tetrachloroethene	ug/L	67 U	67 U	20 U
Toluene	ug/L	67 U	67 U	320 U
trans-1,2-Dichloroethene	ug/L	67 U	67 U	20 U
trans-1,3-Dichloropropene	ug/L	67 U	67 U	20 U
Trichloroethene	ug/L	67 U	67 U	20 U
Trichlorofluoromethane (CFC-11)	ug/L	67 U	67 U	20 U
Trifluorotrchloroethane (Freon 113)	ug/L	67 U	67 U	20 U
Vinyl chloride	ug/L	67 U	67 U	20 U
Xylenes (total)	ug/L	130 U	130 U	40 U
<i>Semi Volatile Organic Compounds</i>				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ethe	ug/L	4.9 U	5.1 U	48 U
2,4,5-Trichlorophenol	ug/L	4.9 U	5.1 U	48 U
2,4,6-Trichlorophenol	ug/L	3.9 U	4.0 U	38 U
2,4-Dichlorophenol	ug/L	9.8 U	10 U	96 U
2,4-Dimethylphenol	ug/L	4.9 U	5.1 U	48 U
2,4-Dinitrophenol	ug/L	20 U	20 U	190 U
2,4-Dinitrotoluene	ug/L	4.9 U	5.1 U	48 U
2,6-Dinitrotoluene	ug/L	4.9 U	5.1 U	48 U
2-Chloronaphthalene	ug/L	4.9 U	5.1 U	170 U
2-Chlorophenol	ug/L	4.9 U	5.1 U	48 U
2-Methylnaphthalene	ug/L	4.9 U	5.1 U	48 U
2-Methylphenol	ug/L	4.9 U	5.1 U	48 U
2-Nitroaniline	ug/L	20 U	20 U	190 U

**VALIDATED ANALYTICAL RESULTS SUMMARY
QUARTERLY MONITORING
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
JANUARY 2014**

<i>Sample Location:</i>	<i>IRM-MW-1</i>	<i>IRM-MW-1</i>	<i>IRM-MW-2</i>	
<i>Sample ID:</i>	<i>GW-18224-013114-SR-001</i>	<i>GW-18224-013114-SR-002</i>	<i>GW-18224-013114-SR-007</i>	
<i>Sample Date:</i>	<i>1/31/2014</i>	<i>1/31/2014</i> <i>Duplicate</i>	<i>1/31/2014</i>	
<i>Parameter</i>	<i>Units</i>			
2-Nitrophenol	ug/L	4.9 U	5.1 U	48 U
3&4-Methylphenol	ug/L	4.9 U	5.1 U	48 U
3,3'-Dichlorobenzidine	ug/L	0.98 U	1.0 U	9.6 U
3-Nitroaniline	ug/L	20 U	20 U	190 U
4,6-Dinitro-2-methylphenol	ug/L	20 U	20 U	190 U
4-Bromophenyl phenyl ether	ug/L	4.9 U	5.1 U	48 U
4-Chloro-3-methylphenol	ug/L	4.9 U	5.1 U	48 U
4-Chloroaniline	ug/L	9.8 U	10 U	96 U
4-Chlorophenyl phenyl ether	ug/L	4.9 U	5.1 U	48 U
4-Nitroaniline	ug/L	20 U	20 U	190 U
4-Nitrophenol	ug/L	20 U	20 U	190 U
Acenaphthene	ug/L	4.9 U	5.1 U	48 U
Acenaphthylene	ug/L	4.9 U	5.1 U	48 U
Acetophenone	ug/L	4.9 U	5.1 U	48 U
Anthracene	ug/L	4.9 U	5.1 U	48 U
Atrazine	ug/L	2.9 U	3.0 U	29 U
Benzaldehyde	ug/L	4.9 U	5.1 U	48 U
Benzo(a)anthracene	ug/L	0.98 U	1.0 U	9.6 U
Benzo(a)pyrene	ug/L	0.98 U	1.0 U	9.6 U
Benzo(b)fluoranthene	ug/L	0.98 U	1.0 U	9.6 U
Benzo(g,h,i)perylene	ug/L	0.98 U	1.0 U	9.6 U
Benzo(k)fluoranthene	ug/L	0.98 U	1.0 U	9.6 U
Biphenyl (1,1-Biphenyl)	ug/L	4.9 U	5.1 U	48 U
bis(2-Chloroethoxy)methane	ug/L	4.9 U	5.1 U	48 U
bis(2-Chloroethyl)ether	ug/L	0.98 U	1.0 U	9.6 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	4.9 U	5.1 U	48 U
Butyl benzylphthalate (BBP)	ug/L	4.9 U	5.1 U	48 U
Caprolactam	ug/L	9.8 U	10 U	96 U
Carbazole	ug/L	9.8 U	10 U	96 U
Chrysene	ug/L	0.98 U	1.0 U	9.6 U
Dibenz(a,h)anthracene	ug/L	2.0 U	2.0 U	19 U
Dibenzofuran	ug/L	3.9 U	4.0 U	38 U

**VALIDATED ANALYTICAL RESULTS SUMMARY
 QUARTERLY MONITORING
 ARKEMA EAST PLANT - HALOWAX AREA
 WYANDOTTE/RIVERVIEW, MICHIGAN
 JANUARY 2014**

<i>Sample Location:</i>	<i>IRM-MW-1</i>	<i>IRM-MW-1</i>	<i>IRM-MW-2</i>	
<i>Sample ID:</i>	<i>GW-18224-013114-SR-001</i>	<i>GW-18224-013114-SR-002</i>	<i>GW-18224-013114-SR-007</i>	
<i>Sample Date:</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	
<i>Parameter</i>	<i>Units</i>	<i>Duplicate</i>		
Diethyl phthalate	ug/L	4.9 U	5.1 U	48 U
Dimethyl phthalate	ug/L	4.9 U	5.1 U	48 U
Di-n-butylphthalate (DBP)	ug/L	4.9 U	5.1 U	48 U
Di-n-octyl phthalate (DnOP)	ug/L	4.9 U	5.1 U	48 U
Fluoranthene	ug/L	0.98 U	1.0 U	9.6 U
Fluorene	ug/L	4.9 U	5.1 U	48 U
Hexachlorobenzene	ug/L	0.20 U	0.20 U	1.9 U
Hexachlorobutadiene	ug/L	0.98 U	1.0 U	9.6 U
Hexachlorocyclopentadiene	ug/L	4.9 U	5.1 U	48 U
Hexachloroethane	ug/L	4.9 U	5.1 U	48 U
Indeno(1,2,3-cd)pyrene	ug/L	2.0 U	2.0 U	19 U
Isophorone	ug/L	4.9 U	5.1 U	48 U
Naphthalene	ug/L	4.9 U	5.1 U	210
Nitrobenzene	ug/L	2.9 U	3.0 U	29 U
N-Nitrosodi-n-propylamine	ug/L	4.9 U	5.1 U	48 U
N-Nitrosodiphenylamine	ug/L	4.9 U	5.1 U	48 U
Pentachlorophenol	ug/L	4.9 U	5.1 U	48 U
Phenanthrene	ug/L	2.0 U	2.0 U	19 U
Phenol	ug/L	4.9 U	5.1 U	48 U
Pyrene	ug/L	4.9 U	5.1 U	48 U
Metals				
Chromium	ug/L	8.9	8.3	5.0 U
Lead	ug/L	3.0 U	3.0 U	3.0 U

Notes:

R - Rejected

U - Not present at or above the associated value.

TABLE 2

**VALIDATED ANALYTICAL RESULTS SUMMARY
 QUARTERLY MONITORING
 ARKEMA EAST PLANT - HALOWAX AREA
 WYANDOTTE/RIVERVIEW, MICHIGAN
 JANUARY 2014**

<i>Sample Location:</i>	<i>IRM-MW-3</i>	<i>MW010A</i>	<i>MW016</i>	
<i>Sample ID:</i>	<i>GW-18224-013114-SR-006</i>	<i>GW-18224-013114-SR-003</i>	<i>GW-18224-013114-SR-004</i>	
<i>Sample Date:</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	
<i>Parameter</i>	<i>Units</i>			
<i>Volatile Organic Compounds</i>				
1,1,1-Trichloroethane	ug/L	6.7 U	5.0 U	4.0 U
1,1,2,2-Tetrachloroethane	ug/L	6.7 U	5.0 U	4.0 U
1,1,2-Trichloroethane	ug/L	6.7 U	5.0 U	4.0 U
1,1-Dichloroethane	ug/L	6.7 U	5.0 U	4.0 U
1,1-Dichloroethene	ug/L	6.7 U	5.0 U	4.0 U
1,2,4-Trichlorobenzene	ug/L	6.7 U	5.0 U	4.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	6.7 U	5.0 U	4.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	6.7 U	5.0 U	4.0 U
1,2-Dichlorobenzene	ug/L	11	5.0 U	4.0 U
1,2-Dichloroethane	ug/L	6.7 U	5.0 U	4.0 U
1,2-Dichloropropane	ug/L	6.7 U	5.0 U	4.0 U
1,3-Dichlorobenzene	ug/L	11	5.0 U	4.0 U
1,4-Dichlorobenzene	ug/L	18	5.0 U	4.0 U
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	67 U	50 U	40 U
2-Hexanone	ug/L	67 U	50 U	40 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	67 U	50 U	40 U
Acetone	ug/L	67 U	50 U	40 U
Benzene	ug/L	12	5.0 U	4.0 U
Bromodichloromethane	ug/L	6.7 U	5.0 U	4.0 U
Bromoform	ug/L	6.7 U	5.0 U	4.0 U
Bromomethane (Methyl bromide)	ug/L	6.7 U	5.0 U	4.0 U
Carbon disulfide	ug/L	33 U	25 U	20 U
Carbon tetrachloride	ug/L	6.7 U	5.0 U	4.0 U
Chlorobenzene	ug/L	240	5.0 U	4.0 U
Chloroethane	ug/L	6.7 U	5.0 U	72
Chloroform (Trichloromethane)	ug/L	6.7 U	5.0 U	4.0 U
Chloromethane (Methyl chloride)	ug/L	6.7 U	5.0 U	4.0 U
cis-1,2-Dichloroethene	ug/L	6.7 U	170	4.0 U
cis-1,3-Dichloropropene	ug/L	6.7 U	5.0 U	4.0 U
Cyclohexane	ug/L	6.7 U	5.0 U	4.0 U
Dibromochloromethane	ug/L	6.7 U	5.0 U	4.0 U

**VALIDATED ANALYTICAL RESULTS SUMMARY
QUARTERLY MONITORING
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
JANUARY 2014**

<i>Sample Location:</i>	<i>IRM-MW-3</i>	<i>MW010A</i>	<i>MW016</i>	
<i>Sample ID:</i>	<i>GW-18224-013114-SR-006</i>	<i>GW-18224-013114-SR-003</i>	<i>GW-18224-013114-SR-004</i>	
<i>Sample Date:</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	
Parameter	Units			
Dichlorodifluoromethane (CFC-12)	ug/L	6.7 U	5.0 U	4.0 U
Ethylbenzene	ug/L	6.7 U	5.0 U	4.0 U
Isopropyl benzene	ug/L	6.7 U	5.0 U	4.0 U
Methyl acetate	ug/L	67 U	50 U	40 U
Methyl cyclohexane	ug/L	6.7 U	5.0 U	4.0 U
Methyl tert butyl ether (MTBE)	ug/L	6.7 U	5.0 U	4.0 U
Methylene chloride	ug/L	33 U	25 U	20 U
Styrene	ug/L	6.7 U	5.0 U	4.0 U
Tetrachloroethene	ug/L	6.7 U	18	4.0 U
Toluene	ug/L	6.7 U	5.0 U	4.0 U
trans-1,2-Dichloroethene	ug/L	6.7 U	100	4.0 U
trans-1,3-Dichloropropene	ug/L	6.7 U	5.0 U	4.0 U
Trichloroethene	ug/L	6.7 U	88	4.0 U
Trichlorofluoromethane (CFC-11)	ug/L	6.7 U	5.0 U	4.0 U
Trifluorotrchloroethane (Freon 113)	ug/L	6.7 U	6.2	4.0 U
Vinyl chloride	ug/L	6.7 U	26	4.0 U
Xylenes (total)	ug/L	13 U	10 U	8.0 U
Semi Volatile Organic Compounds				
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ethe	ug/L	5.0 U	4.8 U	4.8 U
2,4,5-Trichlorophenol	ug/L	5.0 U	4.8 U	4.8 U
2,4,6-Trichlorophenol	ug/L	4.0 U	3.8 U	3.8 U
2,4-Dichlorophenol	ug/L	9.9 U	9.6 U	9.5 U
2,4-Dimethylphenol	ug/L	5.0 U	4.8 U	4.8 U
2,4-Dinitrophenol	ug/L	20 U	19 U	19 U
2,4-Dinitrotoluene	ug/L	5.0 U	4.8 U	4.8 U
2,6-Dinitrotoluene	ug/L	5.0 U	4.8 U	4.8 U
2-Chloronaphthalene	ug/L	6.2	4.8 U	4.8 U
2-Chlorophenol	ug/L	5.0 U	4.8 U	4.8 U
2-Methylnaphthalene	ug/L	5.0 U	4.8 U	4.8 U
2-Methylphenol	ug/L	5.0 U	4.8 U	4.8 U
2-Nitroaniline	ug/L	20 U	19 U	19 U

VALIDATED ANALYTICAL RESULTS SUMMARY
QUARTERLY MONITORING
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
JANUARY 2014

Sample Location:**Sample ID:****Sample Date:****IRM-MW-3****GW-18224-013114-SR-006****1/31/2014****MW010A****GW-18224-013114-SR-003****1/31/2014****MW016****GW-18224-013114-SR-004****1/31/2014**

Parameter	Units			
2-Nitrophenol	ug/L	5.0 U	4.8 U	4.8 U
3&4-Methylphenol	ug/L	5.0 U	4.8 U	4.8 U
3,3'-Dichlorobenzidine	ug/L	0.99 U	0.96 U	0.95 U
3-Nitroaniline	ug/L	20 U	19 U	19 U
4,6-Dinitro-2-methylphenol	ug/L	20 U	19 U	19 U
4-Bromophenyl phenyl ether	ug/L	5.0 U	4.8 U	4.8 U
4-Chloro-3-methylphenol	ug/L	5.0 U	4.8 U	4.8 U
4-Chloroaniline	ug/L	9.9 U	9.6 U	9.5 U
4-Chlorophenyl phenyl ether	ug/L	5.0 U	4.8 U	4.8 U
4-Nitroaniline	ug/L	20 U	19 U	19 U
4-Nitrophenol	ug/L	20 U	19 U	19 U
Acenaphthene	ug/L	5.0 U	4.8 U	4.8 U
Acenaphthylene	ug/L	5.0 U	4.8 U	4.8 U
Acetophenone	ug/L	5.0 U	4.8 U	4.8 U
Anthracene	ug/L	5.0 U	4.8 U	4.8 U
Atrazine	ug/L	3.0 U	2.9 U	2.9 U
Benzaldehyde	ug/L	5.0 U	4.8 U	4.8 U
Benzo(a)anthracene	ug/L	0.99 U	0.96 U	0.95 U
Benzo(a)pyrene	ug/L	0.99 U	0.96 U	0.95 U
Benzo(b)fluoranthene	ug/L	0.99 U	0.96 U	0.95 U
Benzo(g,h,i)perylene	ug/L	0.99 U	0.96 U	0.95 U
Benzo(k)fluoranthene	ug/L	0.99 U	0.96 U	0.95 U
Biphenyl (1,1-Biphenyl)	ug/L	5.0 U	4.8 U	4.8 U
bis(2-Chloroethoxy)methane	ug/L	5.0 U	4.8 U	4.8 U
bis(2-Chloroethyl)ether	ug/L	0.99 U	0.96 U	0.95 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	5.0 U	4.8 U	4.8 U
Butyl benzylphthalate (BBP)	ug/L	5.0 U	4.8 U	4.8 U
Caprolactam	ug/L	9.9 U	9.6 U	9.5 U
Carbazole	ug/L	9.9 U	9.6 U	9.5 U
Chrysene	ug/L	0.99 U	0.96 U	0.95 U
Dibenz(a,h)anthracene	ug/L	2.0 U	1.9 U	1.9 U
Dibenzofuran	ug/L	4.0 U	3.8 U	3.8 U

**VALIDATED ANALYTICAL RESULTS SUMMARY
QUARTERLY MONITORING
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
JANUARY 2014**

<i>Sample Location:</i>	<i>IRM-MW-3</i>	<i>MW010A</i>	<i>MW016</i>	
<i>Sample ID:</i>	<i>GW-18224-013114-SR-006</i>	<i>GW-18224-013114-SR-003</i>	<i>GW-18224-013114-SR-004</i>	
<i>Sample Date:</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	<i>1/31/2014</i>	
<i>Parameter</i>	<i>Units</i>			
Diethyl phthalate	ug/L	5.0 U	4.8 U	4.8 U
Dimethyl phthalate	ug/L	5.0 U	4.8 U	4.8 U
Di-n-butylphthalate (DBP)	ug/L	5.0 U	4.8 U	4.8 U
Di-n-octyl phthalate (DnOP)	ug/L	5.0 U	4.8 U	4.8 U
Fluoranthene	ug/L	0.99 U	0.96 U	0.95 U
Fluorene	ug/L	5.0 U	4.8 U	4.8 U
Hexachlorobenzene	ug/L	0.20 U	0.19 U	0.19 U
Hexachlorobutadiene	ug/L	0.99 U	0.96 U	0.95 U
Hexachlorocyclopentadiene	ug/L	5.0 U	4.8 U	4.8 U
Hexachloroethane	ug/L	5.0 U	4.8 U	4.8 U
Indeno(1,2,3-cd)pyrene	ug/L	2.0 U	1.9 U	1.9 U
Isophorone	ug/L	5.0 U	4.8 U	4.8 U
Naphthalene	ug/L	5.0 U	4.8 U	4.8 U
Nitrobenzene	ug/L	3.0 U	2.9 U	2.9 U
N-Nitrosodi-n-propylamine	ug/L	5.0 U	4.8 U	4.8 U
N-Nitrosodiphenylamine	ug/L	5.0 U	4.8 U	4.8 U
Pentachlorophenol	ug/L	5.0 U	4.8 U	4.8 U
Phenanthrene	ug/L	2.0 U	1.9 U	1.9 U
Phenol	ug/L	5.0 U	4.8 U	4.8 U
Pyrene	ug/L	5.0 U	4.8 U	4.8 U
<i>Metals</i>				
Chromium	ug/L	5.0 U	5.0 U	36
Lead	ug/L	3.0 U	3.0 U	3.0 U

Notes:

R - Rejected

U - Not present at or above the associated value.

**VALIDATED ANALYTICAL RESULTS SUMMARY
 QUARTERLY MONITORING
 ARKEMA EAST PLANT - HALOWAX AREA
 WYANDOTTE/RIVERVIEW, MICHIGAN
 JANUARY 2014**

Sample Location:**MW025****Sample ID:****GW-18224-013114-SR-005****Sample Date:****1/31/2014**

Parameter	Units	
<i>Volatile Organic Compounds</i>		
1,1,1-Trichloroethane	ug/L	4.0 U
1,1,2,2-Tetrachloroethane	ug/L	4.0 U
1,1,2-Trichloroethane	ug/L	4.0 U
1,1-Dichloroethane	ug/L	4.0 U
1,1-Dichloroethene	ug/L	4.0 U
1,2,4-Trichlorobenzene	ug/L	4.0 U
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	4.0 U
1,2-Dibromoethane (Ethylene dibromide)	ug/L	4.0 U
1,2-Dichlorobenzene	ug/L	4.4
1,2-Dichloroethane	ug/L	4.0 U
1,2-Dichloropropane	ug/L	4.0 U
1,3-Dichlorobenzene	ug/L	4.0 U
1,4-Dichlorobenzene	ug/L	10
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	40 U
2-Hexanone	ug/L	40 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	40 U
Acetone	ug/L	40 U
Benzene	ug/L	4.0 U
Bromodichloromethane	ug/L	4.0 U
Bromoform	ug/L	4.0 U
Bromomethane (Methyl bromide)	ug/L	4.0 U
Carbon disulfide	ug/L	20 U
Carbon tetrachloride	ug/L	4.0 U
Chlorobenzene	ug/L	51
Chloroethane	ug/L	4.0 U
Chloroform (Trichloromethane)	ug/L	4.0 U
Chloromethane (Methyl chloride)	ug/L	4.0 U
cis-1,2-Dichloroethene	ug/L	4.0 U
cis-1,3-Dichloropropene	ug/L	4.0 U
Cyclohexane	ug/L	4.0 U
Dibromochloromethane	ug/L	4.0 U

**VALIDATED ANALYTICAL RESULTS SUMMARY
QUARTERLY MONITORING
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
JANUARY 2014**

Sample Location:
Sample ID:
Sample Date:

**MW025
GW-18224-013114-SR-005
1/31/2014**

Parameter	Units	
Dichlorodifluoromethane (CFC-12)	ug/L	4.0 U
Ethylbenzene	ug/L	4.0 U
Isopropyl benzene	ug/L	4.0 U
Methyl acetate	ug/L	40 U
Methyl cyclohexane	ug/L	4.0 U
Methyl tert butyl ether (MTBE)	ug/L	4.0 U
Methylene chloride	ug/L	20 U
Styrene	ug/L	4.0 U
Tetrachloroethene	ug/L	4.0 U
Toluene	ug/L	4.0 U
trans-1,2-Dichloroethene	ug/L	4.0 U
trans-1,3-Dichloropropene	ug/L	4.0 U
Trichloroethene	ug/L	4.0 U
Trichlorofluoromethane (CFC-11)	ug/L	4.0 U
Trifluorotrchloroethane (Freon 113)	ug/L	4.0 U
Vinyl chloride	ug/L	4.0 U
Xylenes (total)	ug/L	8.0 U
Semi Volatile Organic Compounds		
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ethe	ug/L	5.0 U
2,4,5-Trichlorophenol	ug/L	5.0 U
2,4,6-Trichlorophenol	ug/L	4.0 U
2,4-Dichlorophenol	ug/L	9.9 U
2,4-Dimethylphenol	ug/L	5.0 U
2,4-Dinitrophenol	ug/L	20 U
2,4-Dinitrotoluene	ug/L	5.0 U
2,6-Dinitrotoluene	ug/L	5.0 U
2-Chloronaphthalene	ug/L	5.0 U
2-Chlorophenol	ug/L	5.0 U
2-Methylnaphthalene	ug/L	5.0 U
2-Methylphenol	ug/L	5.0 U
2-Nitroaniline	ug/L	20 U

**VALIDATED ANALYTICAL RESULTS SUMMARY
QUARTERLY MONITORING
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
JANUARY 2014**

Sample Location:
Sample ID:
Sample Date:

**MW025
GW-18224-013114-SR-005
1/31/2014**

<i>Parameter</i>	<i>Units</i>	
2-Nitrophenol	ug/L	5.0 U
3&4-Methylphenol	ug/L	5.0 U
3,3'-Dichlorobenzidine	ug/L	R
3-Nitroaniline	ug/L	20 U
4,6-Dinitro-2-methylphenol	ug/L	20 U
4-Bromophenyl phenyl ether	ug/L	5.0 U
4-Chloro-3-methylphenol	ug/L	5.0 U
4-Chloroaniline	ug/L	9.9 U
4-Chlorophenyl phenyl ether	ug/L	5.0 U
4-Nitroaniline	ug/L	20 U
4-Nitrophenol	ug/L	20 U
Acenaphthene	ug/L	5.0 U
Acenaphthylene	ug/L	5.0 U
Acetophenone	ug/L	5.0 U
Anthracene	ug/L	5.0 U
Atrazine	ug/L	3.0 U
Benzaldehyde	ug/L	5.0 U
Benzo(a)anthracene	ug/L	0.99 U
Benzo(a)pyrene	ug/L	R
Benzo(b)fluoranthene	ug/L	R
Benzo(g,h,i)perylene	ug/L	R
Benzo(k)fluoranthene	ug/L	R
Biphenyl (1,1-Biphenyl)	ug/L	5.0 U
bis(2-Chloroethoxy)methane	ug/L	5.0 U
bis(2-Chloroethyl)ether	ug/L	0.99 U
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	R
Butyl benzylphthalate (BBP)	ug/L	5.0 U
Caprolactam	ug/L	9.9 U
Carbazole	ug/L	9.9 U
Chrysene	ug/L	0.99 U
Dibenz(a,h)anthracene	ug/L	R
Dibenzofuran	ug/L	4.0 U

**VALIDATED ANALYTICAL RESULTS SUMMARY
 QUARTERLY MONITORING
 ARKEMA EAST PLANT - HALOWAX AREA
 WYANDOTTE/RIVERVIEW, MICHIGAN
 JANUARY 2014**

Sample Location:
Sample ID:
Sample Date:

**MW025
 GW-18224-013114-SR-005
 1/31/2014**

Parameter	Units	
Diethyl phthalate	ug/L	5.0 U
Dimethyl phthalate	ug/L	5.0 U
Di-n-butylphthalate (DBP)	ug/L	5.0 U
Di-n-octyl phthalate (DnOP)	ug/L	R
Fluoranthene	ug/L	0.99 U
Fluorene	ug/L	5.0 U
Hexachlorobenzene	ug/L	0.20 U
Hexachlorobutadiene	ug/L	0.99 U
Hexachlorocyclopentadiene	ug/L	5.0 U
Hexachloroethane	ug/L	5.0 U
Indeno(1,2,3-cd)pyrene	ug/L	R
Isophorone	ug/L	5.0 U
Naphthalene	ug/L	5.0 U
Nitrobenzene	ug/L	3.0 U
N-Nitrosodi-n-propylamine	ug/L	5.0 U
N-Nitrosodiphenylamine	ug/L	5.0 U
Pentachlorophenol	ug/L	5.0 U
Phenanthrene	ug/L	2.0 U
Phenol	ug/L	5.0 U
Pyrene	ug/L	5.0 U
Metals		
Chromium	ug/L	11
Lead	ug/L	3.0 U

Notes:

R - Rejected

U - Not present at or above the associated value.

TABLE 3

ANALYTICAL METHODS AND HOLDING TIME CRITERIA
 QUARTERLY MONITORING
 ARKEMA EAST PLANT - HALOWAX AREA
 WYANDOTTE/RIVERVIEW, MICHIGAN
 JANUARY 2014

<i>Parameter</i>	<i>Method</i>	<i>Matrix</i>	<i>Preservation</i>	<i>Holding Time</i>	
				<i>Collection to Extraction (Days)</i>	<i>Collection or Extraction to Analysis (Days)</i>
TCL VOC	SW-846 8260	Water	pH < 2 and Iced, 4 ± 2° C	-	14
TCL SVOC	SW-846 8270C	Water	Iced, 4 ± 2° C	7	40
Chromium and Lead	SW-846 6010B	Water	pH < 2 and Iced, 4 ± 2° C	-	180

Notes:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions
 TCL - Target Compound List
 VOC - Volatile Organic Compounds
 SVOC - Semivolatile Organic Compounds

TABLE 4

**QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS
QUARTERLY MONITORING
ARKEMA EAST PLANT - HALOWAX AREA
WYANDOTTE/RIVERVIEW, MICHIGAN
JANUARY 2014**

Parameter	Sample ID	Analyte	MS	MSD	RPD (percent)	Control Limits		Qualified Result	Units
			% Recovery	% Recovery		% Recovery	RPD		
TCL SVOC	GW-18224-013114-SR-005	bis(2-Ethylhexyl)phthalate	23	9	95	10 - 112	71	R	µg/L
		Di-n-octyl phthalate	19	5	120	10 - 118	92	R	µg/L
		Benzo(g,h,i)perylene	19	5	117	10 - 110	60	R	µg/L
		Indeno(1,2,3-cd)pyrene	19	5	120	10 - 110	58	R	µg/L
		Benzo(b)fluoranthene	19	8	87	10 - 110	45	R	µg/L
		Benzo(k)fluoranthene	21	6	115	10 - 110	48	R	µg/L
		Benzo(a)pyrene	19	7	97	10 - 110	60	R	µg/L
		Dibenz(a,h)anthracene	20	5	118	10 - 111	63	R	µg/L
		3,3'-Dichlorobenzidine	0	0	NC	10 - 110	99	R	µg/L

Notes:

R - Rejected

MS - Matrix spike

MSD - Matrix spike duplicate

RPD - Relative percent difference

NC - Not calculable

Attachment C

Laboratory Analytical Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-33801-1

Client Project/Site: 18224, Arkema Halowax Area

For:

Conestoga-Rovers & Associates, Inc.

14496 Sheldon Road, Suite 200

Plymouth, Michigan 48170

Attn: Rawa Fleisher



Authorized for release by:

2/12/2014 10:31:43 AM

Denise Heckler, Project Manager II

(330)966-9477

denise.heckler@testamericainc.com



LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

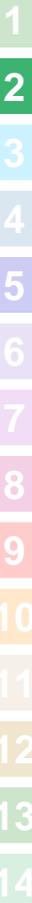


Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	5
Sample Summary	6
Detection Summary	7
Method Summary	9
Client Sample Results	10
QC Association Summary	47
QC Sample Results	49
Surrogate Summary	64
Lab Chronicle	65
Certification Summary	67
Chain of Custody	68

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Job ID: 240-33801-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: Conestoga-Rovers & Associates, Inc.

Project: 18224, Arkema Halowax Area

Report Number: 240-33801-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 02/01/2014; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 1.2° C, 2.4° C and 2.6° C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples GW-18224-013114-SR-001 (240-33801-1), GW-18224-013114-SR-002 (240-33801-2), GW-18224-013114-SR-003 (240-33801-3), GW-18224-013114-SR-004 (240-33801-4), GW-18224-013114-SR-005 (240-33801-5), GW-18224-013114-SR-006 (240-33801-6), GW-18224-013114-SR-007 (240-33801-7) and TB-18224-013114 (240-33801-8) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 02/07/2014 and 02/10/2014.

The following sample was diluted due to foaming at the time of purging during the original sample analysis: GW-18224-013114-SR-004 (240-33801-4). Elevated reporting limits (RLs) are provided.

2-Butanone (MEK), 2-Hexanone and Acetone failed the recovery criteria high for LCS 240-118932/4. 2-Butanone (MEK), 2-Hexanone and Acetone failed the recovery criteria high for LCS 240-119106/4. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data has been reported.

2-Hexanone and Vinyl chloride failed the recovery criteria high for the MS of sample GW-18224-013114-SR-005MS (240-33801-5) in batch 240-119106.

Case Narrative

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Job ID: 240-33801-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Several analytes failed the recovery criteria high for the MSD of sample GW-18224-013114-SR-005MSD (240-33801-5) in batch 240-119106.

Samples GW-18224-013114-SR-001 (240-33801-1)[66.67X], GW-18224-013114-SR-002 (240-33801-2)[66.67X], GW-18224-013114-SR-003 (240-33801-3)[5X], GW-18224-013114-SR-004 (240-33801-4)[4X], GW-18224-013114-SR-005 (240-33801-5)[4X], GW-18224-013114-SR-006 (240-33801-6)[6.67X] and GW-18224-013114-SR-007 (240-33801-7)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analysis.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GCMS)

Samples GW-18224-013114-SR-001 (240-33801-1), GW-18224-013114-SR-002 (240-33801-2), GW-18224-013114-SR-003 (240-33801-3), GW-18224-013114-SR-004 (240-33801-4), GW-18224-013114-SR-005 (240-33801-5), GW-18224-013114-SR-006 (240-33801-6) and GW-18224-013114-SR-007 (240-33801-7) were analyzed for semivolatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 02/04/2014 and analyzed on 02/06/2014.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

3,3'-Dichlorobenzidine failed the recovery criteria low for the MS of sample GW-18224-013114-SR-005MS (240-33801-5) in batch 240-118734.

Several analytes failed the recovery criteria low for the MSD of sample GW-18224-013114-SR-005MSD (240-33801-5) in batch 240-118734. Several analytes exceeded the RPD limit.

Sample GW-18224-013114-SR-007 (240-33801-7)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the SVOCs analysis.

All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICP)

Samples GW-18224-013114-SR-001 (240-33801-1), GW-18224-013114-SR-002 (240-33801-2), GW-18224-013114-SR-003 (240-33801-3), GW-18224-013114-SR-004 (240-33801-4), GW-18224-013114-SR-005 (240-33801-5), GW-18224-013114-SR-006 (240-33801-6) and GW-18224-013114-SR-007 (240-33801-7) were analyzed for total recoverable metals (ICP) in accordance with EPA SW-846 Method 6010B. The samples were prepared on 02/04/2014 and analyzed on 02/06/2014.

No difficulties were encountered during the metals analysis.

All quality control parameters were within the acceptance limits.

Definitions/Glossary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
*	LCS or LCSD exceeds the control limits
F1	MS and/or MSD Recovery exceeds the control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
F1	MS and/or MSD Recovery exceeds the control limits
F2	MS/MSD RPD exceeds control limits

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Sample Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-33801-1	GW-18224-013114-SR-001	Water	01/31/14 11:10	02/01/14 09:45
240-33801-2	GW-18224-013114-SR-002	Water	01/31/14 11:10	02/01/14 09:45
240-33801-3	GW-18224-013114-SR-003	Water	01/31/14 10:50	02/01/14 09:45
240-33801-4	GW-18224-013114-SR-004	Water	01/31/14 13:10	02/01/14 09:45
240-33801-5	GW-18224-013114-SR-005	Water	01/31/14 13:45	02/01/14 09:45
240-33801-6	GW-18224-013114-SR-006	Water	01/31/14 15:50	02/01/14 09:45
240-33801-7	GW-18224-013114-SR-007	Water	01/31/14 15:15	02/01/14 09:45
240-33801-8	TB-18224-013114	Water	01/31/14 00:00	02/01/14 09:45

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Client Sample ID: GW-18224-013114-SR-001

Lab Sample ID: 240-33801-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2600		67	ug/L	66.67		8260B	Total/NA
Chromium	8.9		5.0	ug/L	1		6010B	Total Recoverable

Client Sample ID: GW-18224-013114-SR-002

Lab Sample ID: 240-33801-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2600		67	ug/L	66.67		8260B	Total/NA
Chromium	8.3		5.0	ug/L	1		6010B	Total Recoverable

Client Sample ID: GW-18224-013114-SR-003

Lab Sample ID: 240-33801-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	18		5.0	ug/L	5		8260B	Total/NA
Trichloroethene	88		5.0	ug/L	5		8260B	Total/NA
Vinyl chloride	26		5.0	ug/L	5		8260B	Total/NA
cis-1,2-Dichloroethene	170		5.0	ug/L	5		8260B	Total/NA
trans-1,2-Dichloroethene	100		5.0	ug/L	5		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	6.2		5.0	ug/L	5		8260B	Total/NA

Client Sample ID: GW-18224-013114-SR-004

Lab Sample ID: 240-33801-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloroethane	72		4.0	ug/L	4		8260B	Total/NA
Chromium	36		5.0	ug/L	1		6010B	Total Recoverable

Client Sample ID: GW-18224-013114-SR-005

Lab Sample ID: 240-33801-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	51		4.0	ug/L	4		8260B	Total/NA
1,2-Dichlorobenzene	4.4		4.0	ug/L	4		8260B	Total/NA
1,4-Dichlorobenzene	10		4.0	ug/L	4		8260B	Total/NA
Chromium	11		5.0	ug/L	1		6010B	Total Recoverable

Client Sample ID: GW-18224-013114-SR-006

Lab Sample ID: 240-33801-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	12		6.7	ug/L	6.67		8260B	Total/NA
Chlorobenzene	240		6.7	ug/L	6.67		8260B	Total/NA
1,2-Dichlorobenzene	11		6.7	ug/L	6.67		8260B	Total/NA
1,3-Dichlorobenzene	11		6.7	ug/L	6.67		8260B	Total/NA
1,4-Dichlorobenzene	18		6.7	ug/L	6.67		8260B	Total/NA
2-Chloronaphthalene	6.2		5.0	ug/L	1		8270C	Total/NA

Client Sample ID: GW-18224-013114-SR-007

Lab Sample ID: 240-33801-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	360		20	ug/L	20		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Client Sample ID: GW-18224-013114-SR-007 (Continued)

Lab Sample ID: 240-33801-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chlorobenzene	690		20	ug/L	20		8260B	Total/NA
Toluene	320		20	ug/L	20		8260B	Total/NA
1,2-Dichlorobenzene	43		20	ug/L	20		8260B	Total/NA
1,3-Dichlorobenzene	53		20	ug/L	20		8260B	Total/NA
1,4-Dichlorobenzene	220		20	ug/L	20		8260B	Total/NA
2-Chloronaphthalene	170		48	ug/L	10		8270C	Total/NA
Naphthalene	210		48	ug/L	10		8270C	Total/NA

Client Sample ID: TB-18224-013114

Lab Sample ID: 240-33801-8

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Method Summary

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8270C	TCL Semivolatile Compounds (OLMO4.2)	SW846	TAL CAN
6010B	Metals (ICP)	SW846	TAL CAN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-013114-SR-001

Lab Sample ID: 240-33801-1

Date Collected: 01/31/14 11:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	670	U*	670	ug/L			02/07/14 14:09	66.67
Benzene	67	U	67	ug/L			02/07/14 14:09	66.67
Bromodichloromethane	67	U	67	ug/L			02/07/14 14:09	66.67
Bromoform	67	U	67	ug/L			02/07/14 14:09	66.67
Bromomethane	67	U	67	ug/L			02/07/14 14:09	66.67
2-Butanone (MEK)	670	U*	670	ug/L			02/07/14 14:09	66.67
Carbon disulfide	330	U	330	ug/L			02/07/14 14:09	66.67
Carbon tetrachloride	67	U	67	ug/L			02/07/14 14:09	66.67
Chlorobenzene	67	U	67	ug/L			02/07/14 14:09	66.67
Chloroethane	67	U	67	ug/L			02/07/14 14:09	66.67
Chloroform	2600		67	ug/L			02/07/14 14:09	66.67
Chloromethane	67	U	67	ug/L			02/07/14 14:09	66.67
1,1-Dichloroethane	67	U	67	ug/L			02/07/14 14:09	66.67
1,2-Dichloroethane	67	U	67	ug/L			02/07/14 14:09	66.67
1,1-Dichloroethene	67	U	67	ug/L			02/07/14 14:09	66.67
1,2-Dichloropropane	67	U	67	ug/L			02/07/14 14:09	66.67
cis-1,3-Dichloropropene	67	U	67	ug/L			02/07/14 14:09	66.67
trans-1,3-Dichloropropene	67	U	67	ug/L			02/07/14 14:09	66.67
Ethylbenzene	67	U	67	ug/L			02/07/14 14:09	66.67
2-Hexanone	670	U*	670	ug/L			02/07/14 14:09	66.67
Methylene Chloride	330	U	330	ug/L			02/07/14 14:09	66.67
4-Methyl-2-pentanone (MIBK)	670	U	670	ug/L			02/07/14 14:09	66.67
Styrene	67	U	67	ug/L			02/07/14 14:09	66.67
1,1,2,2-Tetrachloroethane	67	U	67	ug/L			02/07/14 14:09	66.67
Tetrachloroethene	67	U	67	ug/L			02/07/14 14:09	66.67
Toluene	67	U	67	ug/L			02/07/14 14:09	66.67
Trichloroethene	67	U	67	ug/L			02/07/14 14:09	66.67
Vinyl chloride	67	U	67	ug/L			02/07/14 14:09	66.67
Xylenes, Total	130	U	130	ug/L			02/07/14 14:09	66.67
1,1,1-Trichloroethane	67	U	67	ug/L			02/07/14 14:09	66.67
1,1,2-Trichloroethane	67	U	67	ug/L			02/07/14 14:09	66.67
Cyclohexane	67	U	67	ug/L			02/07/14 14:09	66.67
1,2-Dibromo-3-Chloropropane	67	U	67	ug/L			02/07/14 14:09	66.67
1,2-Dibromoethane	67	U	67	ug/L			02/07/14 14:09	66.67
Dichlorodifluoromethane	67	U	67	ug/L			02/07/14 14:09	66.67
cis-1,2-Dichloroethene	67	U	67	ug/L			02/07/14 14:09	66.67
trans-1,2-Dichloroethene	67	U	67	ug/L			02/07/14 14:09	66.67
Isopropylbenzene	67	U	67	ug/L			02/07/14 14:09	66.67
Methyl acetate	670	U	670	ug/L			02/07/14 14:09	66.67
Methyl tert-butyl ether	67	U	67	ug/L			02/07/14 14:09	66.67
1,1,2-Trichloro-1,2,2-trifluoroethane	67	U	67	ug/L			02/07/14 14:09	66.67
1,2,4-Trichlorobenzene	67	U	67	ug/L			02/07/14 14:09	66.67
1,2-Dichlorobenzene	67	U	67	ug/L			02/07/14 14:09	66.67
1,3-Dichlorobenzene	67	U	67	ug/L			02/07/14 14:09	66.67
1,4-Dichlorobenzene	67	U	67	ug/L			02/07/14 14:09	66.67
Trichlorofluoromethane	67	U	67	ug/L			02/07/14 14:09	66.67
Dibromochloromethane	67	U	67	ug/L			02/07/14 14:09	66.67
Methylcyclohexane	67	U	67	ug/L			02/07/14 14:09	66.67

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	89		63 - 129		02/07/14 14:09	66.67
<i>4-Bromofluorobenzene (Surr)</i>	87		66 - 117		02/07/14 14:09	66.67
<i>Toluene-d8 (Surr)</i>	86		74 - 115		02/07/14 14:09	66.67
<i>Dibromofluoromethane (Surr)</i>	95		75 - 121		02/07/14 14:09	66.67

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-013114-SR-002

Lab Sample ID: 240-33801-2

Date Collected: 01/31/14 11:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	670	U *	670	ug/L			02/07/14 14:32	66.67
Benzene	67	U	67	ug/L			02/07/14 14:32	66.67
Bromodichloromethane	67	U	67	ug/L			02/07/14 14:32	66.67
Bromoform	67	U	67	ug/L			02/07/14 14:32	66.67
Bromomethane	67	U	67	ug/L			02/07/14 14:32	66.67
2-Butanone (MEK)	670	U *	670	ug/L			02/07/14 14:32	66.67
Carbon disulfide	330	U	330	ug/L			02/07/14 14:32	66.67
Carbon tetrachloride	67	U	67	ug/L			02/07/14 14:32	66.67
Chlorobenzene	67	U	67	ug/L			02/07/14 14:32	66.67
Chloroethane	67	U	67	ug/L			02/07/14 14:32	66.67
Chloroform	2600		67	ug/L			02/07/14 14:32	66.67
Chloromethane	67	U	67	ug/L			02/07/14 14:32	66.67
1,1-Dichloroethane	67	U	67	ug/L			02/07/14 14:32	66.67
1,2-Dichloroethane	67	U	67	ug/L			02/07/14 14:32	66.67
1,1-Dichloroethene	67	U	67	ug/L			02/07/14 14:32	66.67
1,2-Dichloropropane	67	U	67	ug/L			02/07/14 14:32	66.67
cis-1,3-Dichloropropene	67	U	67	ug/L			02/07/14 14:32	66.67
trans-1,3-Dichloropropene	67	U	67	ug/L			02/07/14 14:32	66.67
Ethylbenzene	67	U	67	ug/L			02/07/14 14:32	66.67
2-Hexanone	670	U *	670	ug/L			02/07/14 14:32	66.67
Methylene Chloride	330	U	330	ug/L			02/07/14 14:32	66.67
4-Methyl-2-pentanone (MIBK)	670	U	670	ug/L			02/07/14 14:32	66.67
Styrene	67	U	67	ug/L			02/07/14 14:32	66.67
1,1,2,2-Tetrachloroethane	67	U	67	ug/L			02/07/14 14:32	66.67
Tetrachloroethene	67	U	67	ug/L			02/07/14 14:32	66.67
Toluene	67	U	67	ug/L			02/07/14 14:32	66.67
Trichloroethene	67	U	67	ug/L			02/07/14 14:32	66.67
Vinyl chloride	67	U	67	ug/L			02/07/14 14:32	66.67
Xylenes, Total	130	U	130	ug/L			02/07/14 14:32	66.67
1,1,1-Trichloroethane	67	U	67	ug/L			02/07/14 14:32	66.67
1,1,2-Trichloroethane	67	U	67	ug/L			02/07/14 14:32	66.67
Cyclohexane	67	U	67	ug/L			02/07/14 14:32	66.67
1,2-Dibromo-3-Chloropropane	67	U	67	ug/L			02/07/14 14:32	66.67
1,2-Dibromoethane	67	U	67	ug/L			02/07/14 14:32	66.67
Dichlorodifluoromethane	67	U	67	ug/L			02/07/14 14:32	66.67
cis-1,2-Dichloroethene	67	U	67	ug/L			02/07/14 14:32	66.67
trans-1,2-Dichloroethene	67	U	67	ug/L			02/07/14 14:32	66.67
Isopropylbenzene	67	U	67	ug/L			02/07/14 14:32	66.67
Methyl acetate	670	U	670	ug/L			02/07/14 14:32	66.67
Methyl tert-butyl ether	67	U	67	ug/L			02/07/14 14:32	66.67
1,1,2-Trichloro-1,2,2-trifluoroethane	67	U	67	ug/L			02/07/14 14:32	66.67
1,2,4-Trichlorobenzene	67	U	67	ug/L			02/07/14 14:32	66.67
1,2-Dichlorobenzene	67	U	67	ug/L			02/07/14 14:32	66.67
1,3-Dichlorobenzene	67	U	67	ug/L			02/07/14 14:32	66.67
1,4-Dichlorobenzene	67	U	67	ug/L			02/07/14 14:32	66.67
Trichlorofluoromethane	67	U	67	ug/L			02/07/14 14:32	66.67
Dibromochloromethane	67	U	67	ug/L			02/07/14 14:32	66.67
Methylcyclohexane	67	U	67	ug/L			02/07/14 14:32	66.67

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	95		63 - 129		02/07/14 14:32	66.67
4-Bromofluorobenzene (Surr)	91		66 - 117		02/07/14 14:32	66.67
Toluene-d8 (Surr)	91		74 - 115		02/07/14 14:32	66.67
Dibromofluoromethane (Surr)	104		75 - 121		02/07/14 14:32	66.67

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-013114-SR-003

Lab Sample ID: 240-33801-3

Date Collected: 01/31/14 10:50

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	50	U *	50	ug/L			02/07/14 14:55	5
Benzene	5.0	U	5.0	ug/L			02/07/14 14:55	5
Bromodichloromethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
Bromoform	5.0	U	5.0	ug/L			02/07/14 14:55	5
Bromomethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
2-Butanone (MEK)	50	U *	50	ug/L			02/07/14 14:55	5
Carbon disulfide	25	U	25	ug/L			02/07/14 14:55	5
Carbon tetrachloride	5.0	U	5.0	ug/L			02/07/14 14:55	5
Chlorobenzene	5.0	U	5.0	ug/L			02/07/14 14:55	5
Chloroethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
Chloroform	5.0	U	5.0	ug/L			02/07/14 14:55	5
Chloromethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,1-Dichloroethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,2-Dichloroethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,1-Dichloroethene	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,2-Dichloropropane	5.0	U	5.0	ug/L			02/07/14 14:55	5
cis-1,3-Dichloropropene	5.0	U	5.0	ug/L			02/07/14 14:55	5
trans-1,3-Dichloropropene	5.0	U	5.0	ug/L			02/07/14 14:55	5
Ethylbenzene	5.0	U	5.0	ug/L			02/07/14 14:55	5
2-Hexanone	50	U *	50	ug/L			02/07/14 14:55	5
Methylene Chloride	25	U	25	ug/L			02/07/14 14:55	5
4-Methyl-2-pentanone (MIBK)	50	U	50	ug/L			02/07/14 14:55	5
Styrene	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,1,2,2-Tetrachloroethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
Tetrachloroethene	18		5.0	ug/L			02/07/14 14:55	5
Toluene	5.0	U	5.0	ug/L			02/07/14 14:55	5
Trichloroethene	88		5.0	ug/L			02/07/14 14:55	5
Vinyl chloride	26		5.0	ug/L			02/07/14 14:55	5
Xylenes, Total	10	U	10	ug/L			02/07/14 14:55	5
1,1,1-Trichloroethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,1,2-Trichloroethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
Cyclohexane	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,2-Dibromoethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
Dichlorodifluoromethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
cis-1,2-Dichloroethene	170		5.0	ug/L			02/07/14 14:55	5
trans-1,2-Dichloroethene	100		5.0	ug/L			02/07/14 14:55	5
Isopropylbenzene	5.0	U	5.0	ug/L			02/07/14 14:55	5
Methyl acetate	50	U	50	ug/L			02/07/14 14:55	5
Methyl tert-butyl ether	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,1,2-Trichloro-1,2,2-trifluoroethane	6.2		5.0	ug/L			02/07/14 14:55	5
1,2,4-Trichlorobenzene	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,2-Dichlorobenzene	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,3-Dichlorobenzene	5.0	U	5.0	ug/L			02/07/14 14:55	5
1,4-Dichlorobenzene	5.0	U	5.0	ug/L			02/07/14 14:55	5
Trichlorofluoromethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
Dibromochloromethane	5.0	U	5.0	ug/L			02/07/14 14:55	5
Methylcyclohexane	5.0	U	5.0	ug/L			02/07/14 14:55	5

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	90		63 - 129		02/07/14 14:55	5
<i>4-Bromofluorobenzene (Surr)</i>	86		66 - 117		02/07/14 14:55	5
<i>Toluene-d8 (Surr)</i>	87		74 - 115		02/07/14 14:55	5
<i>Dibromofluoromethane (Surr)</i>	95		75 - 121		02/07/14 14:55	5

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-013114-SR-004

Lab Sample ID: 240-33801-4

Date Collected: 01/31/14 13:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	40	U *	40	ug/L			02/07/14 15:17	4
Benzene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Bromodichloromethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
Bromoform	4.0	U	4.0	ug/L			02/07/14 15:17	4
Bromomethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
2-Butanone (MEK)	40	U *	40	ug/L			02/07/14 15:17	4
Carbon disulfide	20	U	20	ug/L			02/07/14 15:17	4
Carbon tetrachloride	4.0	U	4.0	ug/L			02/07/14 15:17	4
Chlorobenzene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Chloroethane	72		4.0	ug/L			02/07/14 15:17	4
Chloroform	4.0	U	4.0	ug/L			02/07/14 15:17	4
Chloromethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,1-Dichloroethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,2-Dichloroethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,1-Dichloroethene	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,2-Dichloropropane	4.0	U	4.0	ug/L			02/07/14 15:17	4
cis-1,3-Dichloropropene	4.0	U	4.0	ug/L			02/07/14 15:17	4
trans-1,3-Dichloropropene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Ethylbenzene	4.0	U	4.0	ug/L			02/07/14 15:17	4
2-Hexanone	40	U *	40	ug/L			02/07/14 15:17	4
Methylene Chloride	20	U	20	ug/L			02/07/14 15:17	4
4-Methyl-2-pentanone (MIBK)	40	U	40	ug/L			02/07/14 15:17	4
Styrene	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,1,2,2-Tetrachloroethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
Tetrachloroethene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Toluene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Trichloroethene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Vinyl chloride	4.0	U	4.0	ug/L			02/07/14 15:17	4
Xylenes, Total	8.0	U	8.0	ug/L			02/07/14 15:17	4
1,1,1-Trichloroethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,1,2-Trichloroethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
Cyclohexane	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,2-Dibromoethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
Dichlorodifluoromethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
cis-1,2-Dichloroethene	4.0	U	4.0	ug/L			02/07/14 15:17	4
trans-1,2-Dichloroethene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Isopropylbenzene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Methyl acetate	40	U	40	ug/L			02/07/14 15:17	4
Methyl tert-butyl ether	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,2,4-Trichlorobenzene	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,2-Dichlorobenzene	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,3-Dichlorobenzene	4.0	U	4.0	ug/L			02/07/14 15:17	4
1,4-Dichlorobenzene	4.0	U	4.0	ug/L			02/07/14 15:17	4
Trichlorofluoromethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
Dibromochloromethane	4.0	U	4.0	ug/L			02/07/14 15:17	4
Methylcyclohexane	4.0	U	4.0	ug/L			02/07/14 15:17	4

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	90		63 - 129		02/07/14 15:17	4
<i>4-Bromofluorobenzene (Surr)</i>	87		66 - 117		02/07/14 15:17	4
<i>Toluene-d8 (Surr)</i>	87		74 - 115		02/07/14 15:17	4
<i>Dibromofluoromethane (Surr)</i>	96		75 - 121		02/07/14 15:17	4

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-013114-SR-005

Lab Sample ID: 240-33801-5

Date Collected: 01/31/14 13:45

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	40	U *	40	ug/L			02/10/14 13:25	4
Benzene	4.0	U	4.0	ug/L			02/10/14 13:25	4
Bromodichloromethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
Bromoform	4.0	U	4.0	ug/L			02/10/14 13:25	4
Bromomethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
2-Butanone (MEK)	40	U *	40	ug/L			02/10/14 13:25	4
Carbon disulfide	20	U	20	ug/L			02/10/14 13:25	4
Carbon tetrachloride	4.0	U	4.0	ug/L			02/10/14 13:25	4
Chlorobenzene	51		4.0	ug/L			02/10/14 13:25	4
Chloroethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
Chloroform	4.0	U	4.0	ug/L			02/10/14 13:25	4
Chloromethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,1-Dichloroethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,2-Dichloroethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,1-Dichloroethene	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,2-Dichloropropane	4.0	U	4.0	ug/L			02/10/14 13:25	4
cis-1,3-Dichloropropene	4.0	U	4.0	ug/L			02/10/14 13:25	4
trans-1,3-Dichloropropene	4.0	U	4.0	ug/L			02/10/14 13:25	4
Ethylbenzene	4.0	U	4.0	ug/L			02/10/14 13:25	4
2-Hexanone	40	U *	40	ug/L			02/10/14 13:25	4
Methylene Chloride	20	U	20	ug/L			02/10/14 13:25	4
4-Methyl-2-pentanone (MIBK)	40	U	40	ug/L			02/10/14 13:25	4
Styrene	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,1,2,2-Tetrachloroethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
Tetrachloroethene	4.0	U	4.0	ug/L			02/10/14 13:25	4
Toluene	4.0	U	4.0	ug/L			02/10/14 13:25	4
Trichloroethene	4.0	U	4.0	ug/L			02/10/14 13:25	4
Vinyl chloride	4.0	U	4.0	ug/L			02/10/14 13:25	4
Xylenes, Total	8.0	U	8.0	ug/L			02/10/14 13:25	4
1,1,1-Trichloroethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,1,2-Trichloroethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
Cyclohexane	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,2-Dibromo-3-Chloropropane	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,2-Dibromoethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
Dichlorodifluoromethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
cis-1,2-Dichloroethene	4.0	U	4.0	ug/L			02/10/14 13:25	4
trans-1,2-Dichloroethene	4.0	U	4.0	ug/L			02/10/14 13:25	4
Isopropylbenzene	4.0	U	4.0	ug/L			02/10/14 13:25	4
Methyl acetate	40	U	40	ug/L			02/10/14 13:25	4
Methyl tert-butyl ether	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,2,4-Trichlorobenzene	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,2-Dichlorobenzene	4.4		4.0	ug/L			02/10/14 13:25	4
1,3-Dichlorobenzene	4.0	U	4.0	ug/L			02/10/14 13:25	4
1,4-Dichlorobenzene	10		4.0	ug/L			02/10/14 13:25	4
Trichlorofluoromethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
Dibromochloromethane	4.0	U	4.0	ug/L			02/10/14 13:25	4
Methylcyclohexane	4.0	U	4.0	ug/L			02/10/14 13:25	4

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	90		63 - 129		02/10/14 13:25	4
<i>4-Bromofluorobenzene (Surr)</i>	85		66 - 117		02/10/14 13:25	4
<i>Toluene-d8 (Surr)</i>	86		74 - 115		02/10/14 13:25	4
<i>Dibromofluoromethane (Surr)</i>	95		75 - 121		02/10/14 13:25	4

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-013114-SR-006

Lab Sample ID: 240-33801-6

Date Collected: 01/31/14 15:50

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	67	U *	67	ug/L			02/07/14 15:40	6.67
Benzene	12		6.7	ug/L			02/07/14 15:40	6.67
Bromodichloromethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Bromoform	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Bromomethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
2-Butanone (MEK)	67	U *	67	ug/L			02/07/14 15:40	6.67
Carbon disulfide	33	U	33	ug/L			02/07/14 15:40	6.67
Carbon tetrachloride	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Chlorobenzene	240		6.7	ug/L			02/07/14 15:40	6.67
Chloroethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Chloroform	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Chloromethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,1-Dichloroethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,2-Dichloroethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,1-Dichloroethene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,2-Dichloropropane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
cis-1,3-Dichloropropene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
trans-1,3-Dichloropropene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Ethylbenzene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
2-Hexanone	67	U *	67	ug/L			02/07/14 15:40	6.67
Methylene Chloride	33	U	33	ug/L			02/07/14 15:40	6.67
4-Methyl-2-pentanone (MIBK)	67	U	67	ug/L			02/07/14 15:40	6.67
Styrene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,1,2,2-Tetrachloroethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Tetrachloroethene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Toluene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Trichloroethene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Vinyl chloride	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Xylenes, Total	13	U	13	ug/L			02/07/14 15:40	6.67
1,1,1-Trichloroethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,1,2-Trichloroethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Cyclohexane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,2-Dibromo-3-Chloropropane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,2-Dibromoethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Dichlorodifluoromethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
cis-1,2-Dichloroethene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
trans-1,2-Dichloroethene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Isopropylbenzene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Methyl acetate	67	U	67	ug/L			02/07/14 15:40	6.67
Methyl tert-butyl ether	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,1,2-Trichloro-1,2,2-trifluoroethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,2,4-Trichlorobenzene	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
1,2-Dichlorobenzene	11		6.7	ug/L			02/07/14 15:40	6.67
1,3-Dichlorobenzene	11		6.7	ug/L			02/07/14 15:40	6.67
1,4-Dichlorobenzene	18		6.7	ug/L			02/07/14 15:40	6.67
Trichlorofluoromethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Dibromochloromethane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67
Methylcyclohexane	6.7	U	6.7	ug/L			02/07/14 15:40	6.67

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	95		63 - 129		02/07/14 15:40	6.67
<i>4-Bromofluorobenzene (Surr)</i>	94		66 - 117		02/07/14 15:40	6.67
<i>Toluene-d8 (Surr)</i>	89		74 - 115		02/07/14 15:40	6.67
<i>Dibromofluoromethane (Surr)</i>	100		75 - 121		02/07/14 15:40	6.67

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: GW-18224-013114-SR-007

Lab Sample ID: 240-33801-7

Date Collected: 01/31/14 15:15

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	200	U *	200	ug/L			02/07/14 16:03	20
Benzene	360		20	ug/L			02/07/14 16:03	20
Bromodichloromethane	20	U	20	ug/L			02/07/14 16:03	20
Bromoform	20	U	20	ug/L			02/07/14 16:03	20
Bromomethane	20	U	20	ug/L			02/07/14 16:03	20
2-Butanone (MEK)	200	U *	200	ug/L			02/07/14 16:03	20
Carbon disulfide	100	U	100	ug/L			02/07/14 16:03	20
Carbon tetrachloride	20	U	20	ug/L			02/07/14 16:03	20
Chlorobenzene	690		20	ug/L			02/07/14 16:03	20
Chloroethane	20	U	20	ug/L			02/07/14 16:03	20
Chloroform	20	U	20	ug/L			02/07/14 16:03	20
Chloromethane	20	U	20	ug/L			02/07/14 16:03	20
1,1-Dichloroethane	20	U	20	ug/L			02/07/14 16:03	20
1,2-Dichloroethane	20	U	20	ug/L			02/07/14 16:03	20
1,1-Dichloroethene	20	U	20	ug/L			02/07/14 16:03	20
1,2-Dichloropropane	20	U	20	ug/L			02/07/14 16:03	20
cis-1,3-Dichloropropene	20	U	20	ug/L			02/07/14 16:03	20
trans-1,3-Dichloropropene	20	U	20	ug/L			02/07/14 16:03	20
Ethylbenzene	20	U	20	ug/L			02/07/14 16:03	20
2-Hexanone	200	U *	200	ug/L			02/07/14 16:03	20
Methylene Chloride	100	U	100	ug/L			02/07/14 16:03	20
4-Methyl-2-pentanone (MIBK)	200	U	200	ug/L			02/07/14 16:03	20
Styrene	20	U	20	ug/L			02/07/14 16:03	20
1,1,2,2-Tetrachloroethane	20	U	20	ug/L			02/07/14 16:03	20
Tetrachloroethene	20	U	20	ug/L			02/07/14 16:03	20
Toluene	320		20	ug/L			02/07/14 16:03	20
Trichloroethene	20	U	20	ug/L			02/07/14 16:03	20
Vinyl chloride	20	U	20	ug/L			02/07/14 16:03	20
Xylenes, Total	40	U	40	ug/L			02/07/14 16:03	20
1,1,1-Trichloroethane	20	U	20	ug/L			02/07/14 16:03	20
1,1,2-Trichloroethane	20	U	20	ug/L			02/07/14 16:03	20
Cyclohexane	20	U	20	ug/L			02/07/14 16:03	20
1,2-Dibromo-3-Chloropropane	20	U	20	ug/L			02/07/14 16:03	20
1,2-Dibromoethane	20	U	20	ug/L			02/07/14 16:03	20
Dichlorodifluoromethane	20	U	20	ug/L			02/07/14 16:03	20
cis-1,2-Dichloroethene	20	U	20	ug/L			02/07/14 16:03	20
trans-1,2-Dichloroethene	20	U	20	ug/L			02/07/14 16:03	20
Isopropylbenzene	20	U	20	ug/L			02/07/14 16:03	20
Methyl acetate	200	U	200	ug/L			02/07/14 16:03	20
Methyl tert-butyl ether	20	U	20	ug/L			02/07/14 16:03	20
1,1,2-Trichloro-1,2,2-trifluoroethane	20	U	20	ug/L			02/07/14 16:03	20
1,2,4-Trichlorobenzene	20	U	20	ug/L			02/07/14 16:03	20
1,2-Dichlorobenzene	43		20	ug/L			02/07/14 16:03	20
1,3-Dichlorobenzene	53		20	ug/L			02/07/14 16:03	20
1,4-Dichlorobenzene	220		20	ug/L			02/07/14 16:03	20
Trichlorofluoromethane	20	U	20	ug/L			02/07/14 16:03	20
Dibromochloromethane	20	U	20	ug/L			02/07/14 16:03	20
Methylcyclohexane	20	U	20	ug/L			02/07/14 16:03	20

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,2-Dichloroethane-d4 (Surr)	92		63 - 129		02/07/14 16:03	20
4-Bromofluorobenzene (Surr)	91		66 - 117		02/07/14 16:03	20
Toluene-d8 (Surr)	88		74 - 115		02/07/14 16:03	20
Dibromofluoromethane (Surr)	94		75 - 121		02/07/14 16:03	20

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: TB-18224-013114

Date Collected: 01/31/14 00:00

Date Received: 02/01/14 09:45

Lab Sample ID: 240-33801-8

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U *	10	ug/L			02/07/14 16:25	1
Benzene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Bromodichloromethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
Bromoform	1.0	U	1.0	ug/L			02/07/14 16:25	1
Bromomethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
2-Butanone (MEK)	10	U *	10	ug/L			02/07/14 16:25	1
Carbon disulfide	5.0	U	5.0	ug/L			02/07/14 16:25	1
Carbon tetrachloride	1.0	U	1.0	ug/L			02/07/14 16:25	1
Chlorobenzene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Chloroethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
Chloroform	1.0	U	1.0	ug/L			02/07/14 16:25	1
Chloromethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			02/07/14 16:25	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			02/07/14 16:25	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Ethylbenzene	1.0	U	1.0	ug/L			02/07/14 16:25	1
2-Hexanone	10	U *	10	ug/L			02/07/14 16:25	1
Methylene Chloride	5.0	U	5.0	ug/L			02/07/14 16:25	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			02/07/14 16:25	1
Styrene	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
Tetrachloroethene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Toluene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Trichloroethene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Vinyl chloride	1.0	U	1.0	ug/L			02/07/14 16:25	1
Xylenes, Total	2.0	U	2.0	ug/L			02/07/14 16:25	1
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
Cyclohexane	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,2-Dibromoethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			02/07/14 16:25	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Isopropylbenzene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Methyl acetate	10	U	10	ug/L			02/07/14 16:25	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			02/07/14 16:25	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			02/07/14 16:25	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
Dibromochloromethane	1.0	U	1.0	ug/L			02/07/14 16:25	1
Methylcyclohexane	1.0	U	1.0	ug/L			02/07/14 16:25	1

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	91		63 - 129		02/07/14 16:25	1
<i>4-Bromofluorobenzene (Surr)</i>	86		66 - 117		02/07/14 16:25	1
<i>Toluene-d8 (Surr)</i>	85		74 - 115		02/07/14 16:25	1
<i>Dibromofluoromethane (Surr)</i>	95		75 - 121		02/07/14 16:25	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Client Sample ID: GW-18224-013114-SR-001

Lab Sample ID: 240-33801-1

Date Collected: 01/31/14 11:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2,2'-oxybis[1-chloropropane]	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2,4,5-Trichlorophenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2,4,6-Trichlorophenol	3.9	U	3.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2,4-Dichlorophenol	9.8	U	9.8	ug/L		02/04/14 08:27	02/06/14 15:46	1
2,4-Dimethylphenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2,4-Dinitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 15:46	1
2,4-Dinitrotoluene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2,6-Dinitrotoluene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2-Chloronaphthalene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2-Chlorophenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2-Methylnaphthalene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2-Methylphenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
2-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 15:46	1
2-Nitrophenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
3,3'-Dichlorobenzidine	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
3-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 15:46	1
4,6-Dinitro-2-methylphenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 15:46	1
4-Bromophenyl phenyl ether	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
4-Chloro-3-methylphenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
4-Chloroaniline	9.8	U	9.8	ug/L		02/04/14 08:27	02/06/14 15:46	1
4-Chlorophenyl phenyl ether	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
4-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 15:46	1
4-Nitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 15:46	1
Acenaphthene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Acenaphthylene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Acetophenone	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Anthracene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Atrazine	2.9	U	2.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Benzaldehyde	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Benzo[a]anthracene	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
Benzo[a]pyrene	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
Benzo[b]fluoranthene	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
Benzo[g,h,i]perylene	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
Benzo[k]fluoranthene	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
Bis(2-chloroethoxy)methane	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Bis(2-chloroethyl)ether	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
Bis(2-ethylhexyl) phthalate	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Butyl benzyl phthalate	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Caprolactam	9.8	U	9.8	ug/L		02/04/14 08:27	02/06/14 15:46	1
Carbazole	9.8	U	9.8	ug/L		02/04/14 08:27	02/06/14 15:46	1
Chrysene	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
Dibenz(a,h)anthracene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 15:46	1
Dibenzofuran	3.9	U	3.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Diethyl phthalate	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Dimethyl phthalate	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Di-n-butyl phthalate	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Di-n-octyl phthalate	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Fluoranthene	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Client Sample ID: GW-18224-013114-SR-001

Lab Sample ID: 240-33801-1

Date Collected: 01/31/14 11:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Hexachlorobenzene	0.20	U	0.20	ug/L		02/04/14 08:27	02/06/14 15:46	1
Hexachlorobutadiene	0.98	U	0.98	ug/L		02/04/14 08:27	02/06/14 15:46	1
Hexachlorocyclopentadiene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Hexachloroethane	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 15:46	1
Isophorone	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Naphthalene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Nitrobenzene	2.9	U	2.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
N-Nitrosodi-n-propylamine	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
N-Nitrosodiphenylamine	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Pentachlorophenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Phenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Phenanthrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 15:46	1
Pyrene	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
3 & 4 Methylphenol	4.9	U	4.9	ug/L		02/04/14 08:27	02/06/14 15:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		20 - 110			02/04/14 08:27	02/06/14 15:46	1
2-Fluorophenol (Surr)	66		10 - 110			02/04/14 08:27	02/06/14 15:46	1
2,4,6-Tribromophenol (Surr)	74		21 - 110			02/04/14 08:27	02/06/14 15:46	1
Nitrobenzene-d5 (Surr)	64		21 - 110			02/04/14 08:27	02/06/14 15:46	1
Phenol-d5 (Surr)	67		21 - 110			02/04/14 08:27	02/06/14 15:46	1
Terphenyl-d14 (Surr)	82		24 - 110			02/04/14 08:27	02/06/14 15:46	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Client Sample ID: GW-18224-013114-SR-002

Lab Sample ID: 240-33801-2

Date Collected: 01/31/14 11:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2,2'-oxybis[1-chloropropane]	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2,4,5-Trichlorophenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2,4,6-Trichlorophenol	4.0	U	4.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
2,4-Dichlorophenol	10	U	10	ug/L		02/04/14 08:27	02/06/14 16:10	1
2,4-Dimethylphenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2,4-Dinitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 16:10	1
2,4-Dinitrotoluene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2,6-Dinitrotoluene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2-Chloronaphthalene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2-Chlorophenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2-Methylnaphthalene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2-Methylphenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
2-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 16:10	1
2-Nitrophenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
3,3'-Dichlorobenzidine	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
3-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 16:10	1
4,6-Dinitro-2-methylphenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 16:10	1
4-Bromophenyl phenyl ether	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
4-Chloro-3-methylphenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
4-Chloroaniline	10	U	10	ug/L		02/04/14 08:27	02/06/14 16:10	1
4-Chlorophenyl phenyl ether	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
4-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 16:10	1
4-Nitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 16:10	1
Acenaphthene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Acenaphthylene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Acetophenone	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Anthracene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Atrazine	3.0	U	3.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Benzaldehyde	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Benzo[a]anthracene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Benzo[a]pyrene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Benzo[b]fluoranthene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Benzo[g,h,i]perylene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Benzo[k]fluoranthene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Bis(2-chloroethoxy)methane	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Bis(2-chloroethyl)ether	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Bis(2-ethylhexyl) phthalate	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Butyl benzyl phthalate	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Caprolactam	10	U	10	ug/L		02/04/14 08:27	02/06/14 16:10	1
Carbazole	10	U	10	ug/L		02/04/14 08:27	02/06/14 16:10	1
Chrysene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Dibenz(a,h)anthracene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Dibenzofuran	4.0	U	4.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Diethyl phthalate	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Dimethyl phthalate	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Di-n-butyl phthalate	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Di-n-octyl phthalate	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Fluoranthene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Client Sample ID: GW-18224-013114-SR-002

Lab Sample ID: 240-33801-2

Date Collected: 01/31/14 11:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Hexachlorobenzene	0.20	U	0.20	ug/L		02/04/14 08:27	02/06/14 16:10	1
Hexachlorobutadiene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Hexachlorocyclopentadiene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Hexachloroethane	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Isophorone	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Naphthalene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Nitrobenzene	3.0	U	3.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
N-Nitrosodi-n-propylamine	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
N-Nitrosodiphenylamine	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Pentachlorophenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Phenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Phenanthrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 16:10	1
Pyrene	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
3 & 4 Methylphenol	5.1	U	5.1	ug/L		02/04/14 08:27	02/06/14 16:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	65		20 - 110			02/04/14 08:27	02/06/14 16:10	1
2-Fluorophenol (Surr)	63		10 - 110			02/04/14 08:27	02/06/14 16:10	1
2,4,6-Tribromophenol (Surr)	72		21 - 110			02/04/14 08:27	02/06/14 16:10	1
Nitrobenzene-d5 (Surr)	64		21 - 110			02/04/14 08:27	02/06/14 16:10	1
Phenol-d5 (Surr)	66		21 - 110			02/04/14 08:27	02/06/14 16:10	1
Terphenyl-d14 (Surr)	83		24 - 110			02/04/14 08:27	02/06/14 16:10	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Client Sample ID: GW-18224-013114-SR-003

Lab Sample ID: 240-33801-3

Date Collected: 01/31/14 10:50

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2,2'-oxybis[1-chloropropane]	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2,4,5-Trichlorophenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2,4,6-Trichlorophenol	3.8	U	3.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2,4-Dichlorophenol	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 16:35	1
2,4-Dimethylphenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2,4-Dinitrophenol	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:35	1
2,4-Dinitrotoluene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2,6-Dinitrotoluene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2-Chloronaphthalene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2-Chlorophenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2-Methylnaphthalene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2-Methylphenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
2-Nitroaniline	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:35	1
2-Nitrophenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
3,3'-Dichlorobenzidine	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
3-Nitroaniline	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:35	1
4,6-Dinitro-2-methylphenol	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:35	1
4-Bromophenyl phenyl ether	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
4-Chloro-3-methylphenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
4-Chloroaniline	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 16:35	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
4-Nitroaniline	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:35	1
4-Nitrophenol	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:35	1
Acenaphthene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Acenaphthylene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Acetophenone	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Anthracene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Atrazine	2.9	U	2.9	ug/L		02/04/14 08:27	02/06/14 16:35	1
Benzaldehyde	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Benzo[a]anthracene	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
Benzo[a]pyrene	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
Benzo[b]fluoranthene	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
Benzo[g,h,i]perylene	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
Benzo[k]fluoranthene	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Bis(2-chloroethyl)ether	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
Bis(2-ethylhexyl) phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Butyl benzyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Caprolactam	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 16:35	1
Carbazole	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 16:35	1
Chrysene	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
Dibenz(a,h)anthracene	1.9	U	1.9	ug/L		02/04/14 08:27	02/06/14 16:35	1
Dibenzofuran	3.8	U	3.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Diethyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Dimethyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Di-n-butyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Di-n-octyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Fluoranthene	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Client Sample ID: GW-18224-013114-SR-003

Lab Sample ID: 240-33801-3

Date Collected: 01/31/14 10:50

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Hexachlorobenzene	0.19	U	0.19	ug/L		02/04/14 08:27	02/06/14 16:35	1
Hexachlorobutadiene	0.96	U	0.96	ug/L		02/04/14 08:27	02/06/14 16:35	1
Hexachlorocyclopentadiene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Hexachloroethane	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	ug/L		02/04/14 08:27	02/06/14 16:35	1
Isophorone	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Naphthalene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Nitrobenzene	2.9	U	2.9	ug/L		02/04/14 08:27	02/06/14 16:35	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
N-Nitrosodiphenylamine	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Pentachlorophenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Phenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Phenanthrene	1.9	U	1.9	ug/L		02/04/14 08:27	02/06/14 16:35	1
Pyrene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
3 & 4 Methylphenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	71		20 - 110			02/04/14 08:27	02/06/14 16:35	1
2-Fluorophenol (Surr)	71		10 - 110			02/04/14 08:27	02/06/14 16:35	1
2,4,6-Tribromophenol (Surr)	82		21 - 110			02/04/14 08:27	02/06/14 16:35	1
Nitrobenzene-d5 (Surr)	78		21 - 110			02/04/14 08:27	02/06/14 16:35	1
Phenol-d5 (Surr)	75		21 - 110			02/04/14 08:27	02/06/14 16:35	1
Terphenyl-d14 (Surr)	88		24 - 110			02/04/14 08:27	02/06/14 16:35	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Client Sample ID: GW-18224-013114-SR-004

Lab Sample ID: 240-33801-4

Date Collected: 01/31/14 13:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2,2'-oxybis[1-chloropropane]	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2,4,5-Trichlorophenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2,4,6-Trichlorophenol	3.8	U	3.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2,4-Dichlorophenol	9.5	U	9.5	ug/L		02/04/14 08:27	02/06/14 16:59	1
2,4-Dimethylphenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2,4-Dinitrophenol	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:59	1
2,4-Dinitrotoluene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2,6-Dinitrotoluene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2-Chloronaphthalene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2-Chlorophenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2-Methylnaphthalene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2-Methylphenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
2-Nitroaniline	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:59	1
2-Nitrophenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
3,3'-Dichlorobenzidine	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
3-Nitroaniline	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:59	1
4,6-Dinitro-2-methylphenol	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:59	1
4-Bromophenyl phenyl ether	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
4-Chloro-3-methylphenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
4-Chloroaniline	9.5	U	9.5	ug/L		02/04/14 08:27	02/06/14 16:59	1
4-Chlorophenyl phenyl ether	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
4-Nitroaniline	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:59	1
4-Nitrophenol	19	U	19	ug/L		02/04/14 08:27	02/06/14 16:59	1
Acenaphthene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Acenaphthylene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Acetophenone	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Anthracene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Atrazine	2.9	U	2.9	ug/L		02/04/14 08:27	02/06/14 16:59	1
Benzaldehyde	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Benzo[a]anthracene	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
Benzo[a]pyrene	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
Benzo[b]fluoranthene	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
Benzo[g,h,i]perylene	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
Benzo[k]fluoranthene	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
Bis(2-chloroethoxy)methane	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Bis(2-chloroethyl)ether	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
Bis(2-ethylhexyl) phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Butyl benzyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Caprolactam	9.5	U	9.5	ug/L		02/04/14 08:27	02/06/14 16:59	1
Carbazole	9.5	U	9.5	ug/L		02/04/14 08:27	02/06/14 16:59	1
Chrysene	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
Dibenz(a,h)anthracene	1.9	U	1.9	ug/L		02/04/14 08:27	02/06/14 16:59	1
Dibenzofuran	3.8	U	3.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Diethyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Dimethyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Di-n-butyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Di-n-octyl phthalate	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Fluoranthene	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Client Sample ID: GW-18224-013114-SR-004

Lab Sample ID: 240-33801-4

Date Collected: 01/31/14 13:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Hexachlorobenzene	0.19	U	0.19	ug/L		02/04/14 08:27	02/06/14 16:59	1
Hexachlorobutadiene	0.95	U	0.95	ug/L		02/04/14 08:27	02/06/14 16:59	1
Hexachlorocyclopentadiene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Hexachloroethane	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Indeno[1,2,3-cd]pyrene	1.9	U	1.9	ug/L		02/04/14 08:27	02/06/14 16:59	1
Isophorone	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Naphthalene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Nitrobenzene	2.9	U	2.9	ug/L		02/04/14 08:27	02/06/14 16:59	1
N-Nitrosodi-n-propylamine	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
N-Nitrosodiphenylamine	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Pentachlorophenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Phenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Phenanthrene	1.9	U	1.9	ug/L		02/04/14 08:27	02/06/14 16:59	1
Pyrene	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
3 & 4 Methylphenol	4.8	U	4.8	ug/L		02/04/14 08:27	02/06/14 16:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	65		20 - 110			02/04/14 08:27	02/06/14 16:59	1
2-Fluorophenol (Surr)	61		10 - 110			02/04/14 08:27	02/06/14 16:59	1
2,4,6-Tribromophenol (Surr)	81		21 - 110			02/04/14 08:27	02/06/14 16:59	1
Nitrobenzene-d5 (Surr)	62		21 - 110			02/04/14 08:27	02/06/14 16:59	1
Phenol-d5 (Surr)	67		21 - 110			02/04/14 08:27	02/06/14 16:59	1
Terphenyl-d14 (Surr)	29		24 - 110			02/04/14 08:27	02/06/14 16:59	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Client Sample ID: GW-18224-013114-SR-005

Lab Sample ID: 240-33801-5

Date Collected: 01/31/14 13:45

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2,2'-oxybis[1-chloropropane]	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2,4,5-Trichlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2,4,6-Trichlorophenol	4.0	U	4.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2,4-Dichlorophenol	9.9	U	9.9	ug/L		02/04/14 08:27	02/06/14 17:48	1
2,4-Dimethylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2,4-Dinitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:48	1
2,4-Dinitrotoluene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2,6-Dinitrotoluene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2-Chloronaphthalene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2-Chlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2-Methylnaphthalene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2-Methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
2-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:48	1
2-Nitrophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
3,3'-Dichlorobenzidine	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
3-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:48	1
4,6-Dinitro-2-methylphenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:48	1
4-Bromophenyl phenyl ether	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
4-Chloro-3-methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
4-Chloroaniline	9.9	U	9.9	ug/L		02/04/14 08:27	02/06/14 17:48	1
4-Chlorophenyl phenyl ether	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
4-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:48	1
4-Nitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:48	1
Acenaphthene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Acenaphthylene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Acetophenone	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Anthracene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Atrazine	3.0	U	3.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Benzaldehyde	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Benzo[a]anthracene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
Benzo[a]pyrene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
Benzo[b]fluoranthene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
Benzo[g,h,i]perylene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
Benzo[k]fluoranthene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
Bis(2-chloroethoxy)methane	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Bis(2-chloroethyl)ether	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
Bis(2-ethylhexyl) phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Butyl benzyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Caprolactam	9.9	U	9.9	ug/L		02/04/14 08:27	02/06/14 17:48	1
Carbazole	9.9	U	9.9	ug/L		02/04/14 08:27	02/06/14 17:48	1
Chrysene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
Dibenz(a,h)anthracene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Dibenzofuran	4.0	U	4.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Diethyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Dimethyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Di-n-butyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Di-n-octyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Fluoranthene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Client Sample ID: GW-18224-013114-SR-005

Lab Sample ID: 240-33801-5

Date Collected: 01/31/14 13:45

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Hexachlorobenzene	0.20	U	0.20	ug/L		02/04/14 08:27	02/06/14 17:48	1
Hexachlorobutadiene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:48	1
Hexachlorocyclopentadiene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Hexachloroethane	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Isophorone	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Naphthalene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Nitrobenzene	3.0	U	3.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
N-Nitrosodi-n-propylamine	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
N-Nitrosodiphenylamine	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Pentachlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Phenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Phenanthrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Pyrene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
3 & 4 Methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		20 - 110			02/04/14 08:27	02/06/14 17:48	1
2-Fluorophenol (Surr)	67		10 - 110			02/04/14 08:27	02/06/14 17:48	1
2,4,6-Tribromophenol (Surr)	75		21 - 110			02/04/14 08:27	02/06/14 17:48	1
Nitrobenzene-d5 (Surr)	68		21 - 110			02/04/14 08:27	02/06/14 17:48	1
Phenol-d5 (Surr)	68		21 - 110			02/04/14 08:27	02/06/14 17:48	1
Terphenyl-d14 (Surr)	49		24 - 110			02/04/14 08:27	02/06/14 17:48	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Client Sample ID: GW-18224-013114-SR-006

Lab Sample ID: 240-33801-6

Date Collected: 01/31/14 15:50

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2,2'-oxybis[1-chloropropane]	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2,4,5-Trichlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2,4,6-Trichlorophenol	4.0	U	4.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2,4-Dichlorophenol	9.9	U	9.9	ug/L		02/04/14 08:27	02/06/14 17:24	1
2,4-Dimethylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2,4-Dinitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:24	1
2,4-Dinitrotoluene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2,6-Dinitrotoluene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2-Chloronaphthalene	6.2		5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2-Chlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2-Methylnaphthalene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2-Methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
2-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:24	1
2-Nitrophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
3,3'-Dichlorobenzidine	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
3-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:24	1
4,6-Dinitro-2-methylphenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:24	1
4-Bromophenyl phenyl ether	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
4-Chloro-3-methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
4-Chloroaniline	9.9	U	9.9	ug/L		02/04/14 08:27	02/06/14 17:24	1
4-Chlorophenyl phenyl ether	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
4-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:24	1
4-Nitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 17:24	1
Acenaphthene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Acenaphthylene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Acetophenone	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Anthracene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Atrazine	3.0	U	3.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Benzaldehyde	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Benzo[a]anthracene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
Benzo[a]pyrene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
Benzo[b]fluoranthene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
Benzo[g,h,i]perylene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
Benzo[k]fluoranthene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
Bis(2-chloroethoxy)methane	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Bis(2-chloroethyl)ether	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
Bis(2-ethylhexyl) phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Butyl benzyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Caprolactam	9.9	U	9.9	ug/L		02/04/14 08:27	02/06/14 17:24	1
Carbazole	9.9	U	9.9	ug/L		02/04/14 08:27	02/06/14 17:24	1
Chrysene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
Dibenz(a,h)anthracene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Dibenzofuran	4.0	U	4.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Diethyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Dimethyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Di-n-butyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Di-n-octyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Fluoranthene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Client Sample ID: GW-18224-013114-SR-006

Lab Sample ID: 240-33801-6

Date Collected: 01/31/14 15:50

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Hexachlorobenzene	0.20	U	0.20	ug/L		02/04/14 08:27	02/06/14 17:24	1
Hexachlorobutadiene	0.99	U	0.99	ug/L		02/04/14 08:27	02/06/14 17:24	1
Hexachlorocyclopentadiene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Hexachloroethane	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Isophorone	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Naphthalene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Nitrobenzene	3.0	U	3.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
N-Nitrosodi-n-propylamine	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
N-Nitrosodiphenylamine	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Pentachlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Phenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Phenanthrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Pyrene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
3 & 4 Methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 17:24	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	66		20 - 110			02/04/14 08:27	02/06/14 17:24	1
2-Fluorophenol (Surr)	66		10 - 110			02/04/14 08:27	02/06/14 17:24	1
2,4,6-Tribromophenol (Surr)	81		21 - 110			02/04/14 08:27	02/06/14 17:24	1
Nitrobenzene-d5 (Surr)	65		21 - 110			02/04/14 08:27	02/06/14 17:24	1
Phenol-d5 (Surr)	69		21 - 110			02/04/14 08:27	02/06/14 17:24	1
Terphenyl-d14 (Surr)	83		24 - 110			02/04/14 08:27	02/06/14 17:24	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Client Sample ID: GW-18224-013114-SR-007

Lab Sample ID: 240-33801-7

Date Collected: 01/31/14 15:15

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2,2'-oxybis[1-chloropropane]	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2,4,5-Trichlorophenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2,4,6-Trichlorophenol	38	U	38	ug/L		02/04/14 08:27	02/06/14 19:02	10
2,4-Dichlorophenol	96	U	96	ug/L		02/04/14 08:27	02/06/14 19:02	10
2,4-Dimethylphenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2,4-Dinitrophenol	190	U	190	ug/L		02/04/14 08:27	02/06/14 19:02	10
2,4-Dinitrotoluene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2,6-Dinitrotoluene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2-Chloronaphthalene	170		48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2-Chlorophenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2-Methylnaphthalene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2-Methylphenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
2-Nitroaniline	190	U	190	ug/L		02/04/14 08:27	02/06/14 19:02	10
2-Nitrophenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
3,3'-Dichlorobenzidine	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
3-Nitroaniline	190	U	190	ug/L		02/04/14 08:27	02/06/14 19:02	10
4,6-Dinitro-2-methylphenol	190	U	190	ug/L		02/04/14 08:27	02/06/14 19:02	10
4-Bromophenyl phenyl ether	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
4-Chloro-3-methylphenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
4-Chloroaniline	96	U	96	ug/L		02/04/14 08:27	02/06/14 19:02	10
4-Chlorophenyl phenyl ether	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
4-Nitroaniline	190	U	190	ug/L		02/04/14 08:27	02/06/14 19:02	10
4-Nitrophenol	190	U	190	ug/L		02/04/14 08:27	02/06/14 19:02	10
Acenaphthene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Acenaphthylene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Acetophenone	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Anthracene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Atrazine	29	U	29	ug/L		02/04/14 08:27	02/06/14 19:02	10
Benzaldehyde	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Benzo[a]anthracene	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
Benzo[a]pyrene	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
Benzo[b]fluoranthene	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
Benzo[g,h,i]perylene	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
Benzo[k]fluoranthene	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
Bis(2-chloroethoxy)methane	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Bis(2-chloroethyl)ether	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
Bis(2-ethylhexyl) phthalate	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Butyl benzyl phthalate	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Caprolactam	96	U	96	ug/L		02/04/14 08:27	02/06/14 19:02	10
Carbazole	96	U	96	ug/L		02/04/14 08:27	02/06/14 19:02	10
Chrysene	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
Dibenz(a,h)anthracene	19	U	19	ug/L		02/04/14 08:27	02/06/14 19:02	10
Dibenzofuran	38	U	38	ug/L		02/04/14 08:27	02/06/14 19:02	10
Diethyl phthalate	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Dimethyl phthalate	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Di-n-butyl phthalate	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Di-n-octyl phthalate	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Fluoranthene	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10

TestAmerica Canton

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Client Sample ID: GW-18224-013114-SR-007

Lab Sample ID: 240-33801-7

Date Collected: 01/31/14 15:15

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Hexachlorobenzene	1.9	U	1.9	ug/L		02/04/14 08:27	02/06/14 19:02	10
Hexachlorobutadiene	9.6	U	9.6	ug/L		02/04/14 08:27	02/06/14 19:02	10
Hexachlorocyclopentadiene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Hexachloroethane	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Indeno[1,2,3-cd]pyrene	19	U	19	ug/L		02/04/14 08:27	02/06/14 19:02	10
Isophorone	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Naphthalene	210		48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Nitrobenzene	29	U	29	ug/L		02/04/14 08:27	02/06/14 19:02	10
N-Nitrosodi-n-propylamine	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
N-Nitrosodiphenylamine	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Pentachlorophenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Phenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Phenanthrene	19	U	19	ug/L		02/04/14 08:27	02/06/14 19:02	10
Pyrene	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
3 & 4 Methylphenol	48	U	48	ug/L		02/04/14 08:27	02/06/14 19:02	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl (Surr)	75		20 - 110			02/04/14 08:27	02/06/14 19:02	10
2-Fluorophenol (Surr)	73		10 - 110			02/04/14 08:27	02/06/14 19:02	10
2,4,6-Tribromophenol (Surr)	83		21 - 110			02/04/14 08:27	02/06/14 19:02	10
Nitrobenzene-d5 (Surr)	65		21 - 110			02/04/14 08:27	02/06/14 19:02	10
Phenol-d5 (Surr)	72		21 - 110			02/04/14 08:27	02/06/14 19:02	10
Terphenyl-d14 (Surr)	86		24 - 110			02/04/14 08:27	02/06/14 19:02	10

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-013114-SR-001

Date Collected: 01/31/14 11:10

Date Received: 02/01/14 09:45

Lab Sample ID: 240-33801-1

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	8.9		5.0	ug/L		02/04/14 11:13	02/06/14 14:32	1
Lead	3.0	U	3.0	ug/L		02/04/14 11:13	02/06/14 14:32	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-013114-SR-002

Date Collected: 01/31/14 11:10

Date Received: 02/01/14 09:45

Lab Sample ID: 240-33801-2

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	8.3		5.0	ug/L		02/04/14 11:13	02/06/14 14:44	1
Lead	3.0	U	3.0	ug/L		02/04/14 11:13	02/06/14 14:44	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-013114-SR-003

Date Collected: 01/31/14 10:50

Date Received: 02/01/14 09:45

Lab Sample ID: 240-33801-3

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0	ug/L		02/04/14 11:13	02/06/14 14:49	1
Lead	3.0	U	3.0	ug/L		02/04/14 11:13	02/06/14 14:49	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-013114-SR-004

Lab Sample ID: 240-33801-4

Date Collected: 01/31/14 13:10

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	36		5.0	ug/L		02/04/14 11:13	02/06/14 14:53	1
Lead	3.0	U	3.0	ug/L		02/04/14 11:13	02/06/14 14:53	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-013114-SR-005

Lab Sample ID: 240-33801-5

Date Collected: 01/31/14 13:45

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	11		5.0	ug/L		02/04/14 11:13	02/06/14 14:15	1
Lead	3.0	U	3.0	ug/L		02/04/14 11:13	02/06/14 14:15	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-013114-SR-006

Lab Sample ID: 240-33801-6

Date Collected: 01/31/14 15:50

Matrix: Water

Date Received: 02/01/14 09:45

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0	ug/L		02/04/14 11:13	02/06/14 14:57	1
Lead	3.0	U	3.0	ug/L		02/04/14 11:13	02/06/14 14:57	1

Client Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 6010B - Metals (ICP) - Total Recoverable

Client Sample ID: GW-18224-013114-SR-007

Date Collected: 01/31/14 15:15

Date Received: 02/01/14 09:45

Lab Sample ID: 240-33801-7

Matrix: Water

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	5.0	U	5.0	ug/L		02/04/14 11:13	02/06/14 15:02	1
Lead	3.0	U	3.0	ug/L		02/04/14 11:13	02/06/14 15:02	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

GC/MS VOA

Analysis Batch: 118932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-33801-1	GW-18224-013114-SR-001	Total/NA	Water	8260B	
240-33801-2	GW-18224-013114-SR-002	Total/NA	Water	8260B	
240-33801-3	GW-18224-013114-SR-003	Total/NA	Water	8260B	
240-33801-4	GW-18224-013114-SR-004	Total/NA	Water	8260B	
240-33801-6	GW-18224-013114-SR-006	Total/NA	Water	8260B	
240-33801-7	GW-18224-013114-SR-007	Total/NA	Water	8260B	
240-33801-8	TB-18224-013114	Total/NA	Water	8260B	
LCS 240-118932/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-118932/6	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 119106

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-33801-5	GW-18224-013114-SR-005	Total/NA	Water	8260B	
240-33801-5 MS	GW-18224-013114-SR-005	Total/NA	Water	8260B	
240-33801-5 MSD	GW-18224-013114-SR-005	Total/NA	Water	8260B	
LCS 240-119106/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-119106/6	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 118478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-33801-1	GW-18224-013114-SR-001	Total/NA	Water	3520C	
240-33801-2	GW-18224-013114-SR-002	Total/NA	Water	3520C	
240-33801-3	GW-18224-013114-SR-003	Total/NA	Water	3520C	
240-33801-4	GW-18224-013114-SR-004	Total/NA	Water	3520C	
240-33801-5	GW-18224-013114-SR-005	Total/NA	Water	3520C	
240-33801-5 MS	GW-18224-013114-SR-005	Total/NA	Water	3520C	
240-33801-5 MSD	GW-18224-013114-SR-005	Total/NA	Water	3520C	
240-33801-6	GW-18224-013114-SR-006	Total/NA	Water	3520C	
240-33801-7	GW-18224-013114-SR-007	Total/NA	Water	3520C	
LCS 240-118478/13-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-118478/12-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 118734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-33801-1	GW-18224-013114-SR-001	Total/NA	Water	8270C	118478
240-33801-2	GW-18224-013114-SR-002	Total/NA	Water	8270C	118478
240-33801-3	GW-18224-013114-SR-003	Total/NA	Water	8270C	118478
240-33801-4	GW-18224-013114-SR-004	Total/NA	Water	8270C	118478
240-33801-5	GW-18224-013114-SR-005	Total/NA	Water	8270C	118478
240-33801-5 MS	GW-18224-013114-SR-005	Total/NA	Water	8270C	118478
240-33801-5 MSD	GW-18224-013114-SR-005	Total/NA	Water	8270C	118478
240-33801-6	GW-18224-013114-SR-006	Total/NA	Water	8270C	118478
240-33801-7	GW-18224-013114-SR-007	Total/NA	Water	8270C	118478
LCS 240-118478/13-A	Lab Control Sample	Total/NA	Water	8270C	118478
MB 240-118478/12-A	Method Blank	Total/NA	Water	8270C	118478

QC Association Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Metals

Prep Batch: 118522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-33801-1	GW-18224-013114-SR-001	Total Recoverable	Water	3005A	
240-33801-2	GW-18224-013114-SR-002	Total Recoverable	Water	3005A	
240-33801-3	GW-18224-013114-SR-003	Total Recoverable	Water	3005A	
240-33801-4	GW-18224-013114-SR-004	Total Recoverable	Water	3005A	
240-33801-5	GW-18224-013114-SR-005	Total Recoverable	Water	3005A	
240-33801-5 MS	GW-18224-013114-SR-005	Total Recoverable	Water	3005A	
240-33801-5 MSD	GW-18224-013114-SR-005	Total Recoverable	Water	3005A	
240-33801-6	GW-18224-013114-SR-006	Total Recoverable	Water	3005A	
240-33801-7	GW-18224-013114-SR-007	Total Recoverable	Water	3005A	
LCS 240-118522/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-118522/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 118884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-33801-1	GW-18224-013114-SR-001	Total Recoverable	Water	6010B	118522
240-33801-2	GW-18224-013114-SR-002	Total Recoverable	Water	6010B	118522
240-33801-3	GW-18224-013114-SR-003	Total Recoverable	Water	6010B	118522
240-33801-4	GW-18224-013114-SR-004	Total Recoverable	Water	6010B	118522
240-33801-5	GW-18224-013114-SR-005	Total Recoverable	Water	6010B	118522
240-33801-5 MS	GW-18224-013114-SR-005	Total Recoverable	Water	6010B	118522
240-33801-5 MSD	GW-18224-013114-SR-005	Total Recoverable	Water	6010B	118522
240-33801-6	GW-18224-013114-SR-006	Total Recoverable	Water	6010B	118522
240-33801-7	GW-18224-013114-SR-007	Total Recoverable	Water	6010B	118522
LCS 240-118522/2-A	Lab Control Sample	Total Recoverable	Water	6010B	118522
MB 240-118522/1-A	Method Blank	Total Recoverable	Water	6010B	118522

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-118932/6

Matrix: Water

Analysis Batch: 118932

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	ug/L			02/07/14 12:15	1
Benzene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Bromodichloromethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
Bromoform	1.0	U	1.0	ug/L			02/07/14 12:15	1
Bromomethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
2-Butanone (MEK)	10	U	10	ug/L			02/07/14 12:15	1
Carbon disulfide	5.0	U	5.0	ug/L			02/07/14 12:15	1
Carbon tetrachloride	1.0	U	1.0	ug/L			02/07/14 12:15	1
Chlorobenzene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Chloroethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
Chloroform	1.0	U	1.0	ug/L			02/07/14 12:15	1
Chloromethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			02/07/14 12:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			02/07/14 12:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Ethylbenzene	1.0	U	1.0	ug/L			02/07/14 12:15	1
2-Hexanone	10	U	10	ug/L			02/07/14 12:15	1
Methylene Chloride	5.0	U	5.0	ug/L			02/07/14 12:15	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			02/07/14 12:15	1
Styrene	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
Tetrachloroethene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Toluene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Trichloroethene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Vinyl chloride	1.0	U	1.0	ug/L			02/07/14 12:15	1
Xylenes, Total	2.0	U	2.0	ug/L			02/07/14 12:15	1
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
Cyclohexane	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,2-Dibromoethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			02/07/14 12:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Isopropylbenzene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Methyl acetate	10	U	10	ug/L			02/07/14 12:15	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			02/07/14 12:15	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			02/07/14 12:15	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
Dibromochloromethane	1.0	U	1.0	ug/L			02/07/14 12:15	1
Methylcyclohexane	1.0	U	1.0	ug/L			02/07/14 12:15	1

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-118932/6

Matrix: Water

Analysis Batch: 118932

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	97		63 - 129		02/07/14 12:15	1
4-Bromofluorobenzene (Surr)	92		66 - 117		02/07/14 12:15	1
Toluene-d8 (Surr)	92		74 - 115		02/07/14 12:15	1
Dibromofluoromethane (Surr)	99		75 - 121		02/07/14 12:15	1

Lab Sample ID: LCS 240-118932/4

Matrix: Water

Analysis Batch: 118932

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
							Limits
Acetone	20.0	45.4	*	ug/L		227	43 - 136
Benzene	10.0	10.3		ug/L		103	83 - 112
Bromodichloromethane	10.0	10.4		ug/L		104	72 - 121
Bromoform	10.0	9.05		ug/L		91	40 - 131
Bromomethane	10.0	10.8		ug/L		108	11 - 185
2-Butanone (MEK)	20.0	28.2	*	ug/L		141	60 - 126
Carbon disulfide	10.0	12.0		ug/L		120	62 - 142
Carbon tetrachloride	10.0	10.4		ug/L		104	66 - 128
Chlorobenzene	10.0	9.90		ug/L		99	85 - 110
Chloroethane	10.0	10.7		ug/L		107	25 - 153
Chloroform	10.0	10.2		ug/L		102	79 - 117
Chloromethane	10.0	12.6		ug/L		126	44 - 126
1,1-Dichloroethane	10.0	11.0		ug/L		110	82 - 115
1,2-Dichloroethane	10.0	10.2		ug/L		102	71 - 127
1,1-Dichloroethene	10.0	10.4		ug/L		104	78 - 131
1,2-Dichloropropane	10.0	10.9		ug/L		109	81 - 115
cis-1,3-Dichloropropene	10.0	9.13		ug/L		91	61 - 115
trans-1,3-Dichloropropene	10.0	9.29		ug/L		93	58 - 117
Ethylbenzene	10.0	9.95		ug/L		99	83 - 112
2-Hexanone	20.0	27.3	*	ug/L		137	55 - 133
Methylene Chloride	10.0	9.81		ug/L		98	66 - 131
4-Methyl-2-pentanone (MIBK)	20.0	24.9		ug/L		125	63 - 128
Styrene	10.0	9.05		ug/L		90	79 - 114
1,1,2,2-Tetrachloroethane	10.0	10.2		ug/L		102	68 - 118
Tetrachloroethene	10.0	11.0		ug/L		110	79 - 114
Toluene	10.0	10.1		ug/L		101	84 - 111
Trichloroethene	10.0	10.7		ug/L		107	76 - 117
Vinyl chloride	10.0	12.0		ug/L		120	53 - 127
Xylenes, Total	20.0	20.3		ug/L		102	83 - 112
1,1,1-Trichloroethane	10.0	10.1		ug/L		101	74 - 118
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	80 - 112
Cyclohexane	10.0	11.1		ug/L		111	54 - 121
1,2-Dibromo-3-Chloropropane	10.0	11.2		ug/L		112	42 - 136
1,2-Dibromoethane	10.0	10.6		ug/L		106	79 - 113
Dichlorodifluoromethane	10.0	11.7		ug/L		117	19 - 129
cis-1,2-Dichloroethene	10.0	10.5		ug/L		105	80 - 113
trans-1,2-Dichloroethene	10.0	11.2		ug/L		112	83 - 117
Isopropylbenzene	10.0	10.3		ug/L		103	75 - 114

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-118932/4

Matrix: Water

Analysis Batch: 118932

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	50.0	60.9		ug/L		122	58 - 131
Methyl tert-butyl ether	10.0	10.1		ug/L		101	52 - 144
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.5		ug/L		125	74 - 151
1,2,4-Trichlorobenzene	10.0	9.68		ug/L		97	48 - 135
1,2-Dichlorobenzene	10.0	9.92		ug/L		99	81 - 110
1,3-Dichlorobenzene	10.0	9.87		ug/L		99	80 - 110
1,4-Dichlorobenzene	10.0	9.73		ug/L		97	82 - 110
Trichlorofluoromethane	10.0	10.2		ug/L		102	49 - 157
Dibromochloromethane	10.0	9.17		ug/L		92	64 - 119
Methylcyclohexane	10.0	10.5		ug/L		105	56 - 127

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		63 - 129
4-Bromofluorobenzene (Surr)	101		66 - 117
Toluene-d8 (Surr)	95		74 - 115
Dibromofluoromethane (Surr)	100		75 - 121

Lab Sample ID: MB 240-119106/6

Matrix: Water

Analysis Batch: 119106

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	ug/L			02/10/14 13:02	1
Benzene	1.0	U	1.0	ug/L			02/10/14 13:02	1
Bromodichloromethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
Bromoform	1.0	U	1.0	ug/L			02/10/14 13:02	1
Bromomethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
2-Butanone (MEK)	10	U	10	ug/L			02/10/14 13:02	1
Carbon disulfide	5.0	U	5.0	ug/L			02/10/14 13:02	1
Carbon tetrachloride	1.0	U	1.0	ug/L			02/10/14 13:02	1
Chlorobenzene	1.0	U	1.0	ug/L			02/10/14 13:02	1
Chloroethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
Chloroform	1.0	U	1.0	ug/L			02/10/14 13:02	1
Chloromethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			02/10/14 13:02	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			02/10/14 13:02	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			02/10/14 13:02	1
Ethylbenzene	1.0	U	1.0	ug/L			02/10/14 13:02	1
2-Hexanone	10	U	10	ug/L			02/10/14 13:02	1
Methylene Chloride	5.0	U	5.0	ug/L			02/10/14 13:02	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			02/10/14 13:02	1
Styrene	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
Tetrachloroethene	1.0	U	1.0	ug/L			02/10/14 13:02	1

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 240-119106/6

Matrix: Water

Analysis Batch: 119106

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Toluene	1.0	U	1.0	ug/L			02/10/14 13:02	1
Trichloroethene	1.0	U	1.0	ug/L			02/10/14 13:02	1
Vinyl chloride	1.0	U	1.0	ug/L			02/10/14 13:02	1
Xylenes, Total	2.0	U	2.0	ug/L			02/10/14 13:02	1
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
Cyclohexane	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,2-Dibromo-3-Chloropropane	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,2-Dibromoethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			02/10/14 13:02	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			02/10/14 13:02	1
Isopropylbenzene	1.0	U	1.0	ug/L			02/10/14 13:02	1
Methyl acetate	10	U	10	ug/L			02/10/14 13:02	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			02/10/14 13:02	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			02/10/14 13:02	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
Dibromochloromethane	1.0	U	1.0	ug/L			02/10/14 13:02	1
Methylcyclohexane	1.0	U	1.0	ug/L			02/10/14 13:02	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	94		63 - 129		02/10/14 13:02	1
4-Bromofluorobenzene (Surr)	86		66 - 117		02/10/14 13:02	1
Toluene-d8 (Surr)	88		74 - 115		02/10/14 13:02	1
Dibromofluoromethane (Surr)	94		75 - 121		02/10/14 13:02	1

Lab Sample ID: LCS 240-119106/4

Matrix: Water

Analysis Batch: 119106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	10.6		ug/L		106	83 - 112
Bromodichloromethane	10.0	10.8		ug/L		108	72 - 121
Bromoform	10.0	9.89		ug/L		99	40 - 131
Bromomethane	10.0	11.4		ug/L		114	11 - 185
2-Butanone (MEK)	20.0	25.6	*	ug/L		128	60 - 126
Carbon disulfide	10.0	13.5		ug/L		135	62 - 142
Carbon tetrachloride	10.0	11.1		ug/L		111	66 - 128
Chlorobenzene	10.0	10.4		ug/L		104	85 - 110
Chloroethane	10.0	10.9		ug/L		109	25 - 153
Chloroform	10.0	10.5		ug/L		105	79 - 117
Chloromethane	10.0	12.4		ug/L		124	44 - 126
1,1-Dichloroethane	10.0	11.3		ug/L		113	82 - 115

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 240-119106/4

Matrix: Water

Analysis Batch: 119106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	10.0	10.3		ug/L		103	71 - 127
1,1-Dichloroethene	10.0	11.0		ug/L		110	78 - 131
1,2-Dichloropropane	10.0	11.0		ug/L		110	81 - 115
cis-1,3-Dichloropropene	10.0	9.61		ug/L		96	61 - 115
trans-1,3-Dichloropropene	10.0	9.83		ug/L		98	58 - 117
Ethylbenzene	10.0	10.6		ug/L		106	83 - 112
2-Hexanone	20.0	27.3	*	ug/L		136	55 - 133
Methylene Chloride	10.0	9.67		ug/L		97	66 - 131
4-Methyl-2-pentanone (MIBK)	20.0	25.1		ug/L		125	63 - 128
Styrene	10.0	9.37		ug/L		94	79 - 114
1,1,2,2-Tetrachloroethane	10.0	10.4		ug/L		104	68 - 118
Tetrachloroethene	10.0	11.4		ug/L		114	79 - 114
Toluene	10.0	10.4		ug/L		104	84 - 111
Trichloroethene	10.0	11.0		ug/L		110	76 - 117
Vinyl chloride	10.0	12.4		ug/L		124	53 - 127
Xylenes, Total	20.0	21.3		ug/L		107	83 - 112
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	74 - 118
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	80 - 112
Cyclohexane	10.0	11.3		ug/L		113	54 - 121
1,2-Dibromo-3-Chloropropane	10.0	11.4		ug/L		114	42 - 136
1,2-Dibromoethane	10.0	10.9		ug/L		109	79 - 113
Dichlorodifluoromethane	10.0	12.1		ug/L		121	19 - 129
cis-1,2-Dichloroethene	10.0	10.7		ug/L		107	80 - 113
trans-1,2-Dichloroethene	10.0	11.1		ug/L		111	83 - 117
Isopropylbenzene	10.0	10.9		ug/L		109	75 - 114
Methyl acetate	50.0	60.7		ug/L		121	58 - 131
Methyl tert-butyl ether	10.0	10.6		ug/L		106	52 - 144
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	12.8		ug/L		128	74 - 151
1,2,4-Trichlorobenzene	10.0	10.5		ug/L		105	48 - 135
1,2-Dichlorobenzene	10.0	10.1		ug/L		101	81 - 110
1,3-Dichlorobenzene	10.0	10.1		ug/L		101	80 - 110
1,4-Dichlorobenzene	10.0	10.0		ug/L		100	82 - 110
Trichlorofluoromethane	10.0	11.1		ug/L		111	49 - 157
Dibromochloromethane	10.0	9.62		ug/L		96	64 - 119
Methylcyclohexane	10.0	10.9		ug/L		109	56 - 127

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	90		63 - 129
4-Bromofluorobenzene (Surr)	101		66 - 117
Toluene-d8 (Surr)	96		74 - 115
Dibromofluoromethane (Surr)	98		75 - 121

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-33801-5 MS

Matrix: Water

Analysis Batch: 119106

Client Sample ID: GW-18224-013114-SR-005

Prep Type: Total/NA

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Acetone	40	U *	80.0	114		ug/L		143	33 - 145
Benzene	4.0	U	40.0	44.3		ug/L		109	72 - 121
Bromodichloromethane	4.0	U	40.0	43.6		ug/L		109	67 - 120
Bromoform	4.0	U	40.0	41.0		ug/L		102	32 - 128
Bromomethane	4.0	U	40.0	43.6		ug/L		109	10 - 186
2-Butanone (MEK)	40	U *	80.0	99.5		ug/L		124	54 - 129
Carbon disulfide	20	U	40.0	49.4		ug/L		116	57 - 147
Carbon tetrachloride	4.0	U	40.0	44.2		ug/L		111	59 - 129
Chlorobenzene	51		40.0	94.9		ug/L		109	80 - 110
Chloroethane	4.0	U	40.0	46.7		ug/L		117	21 - 165
Chloroform	4.0	U	40.0	46.6		ug/L		111	76 - 118
Chloromethane	4.0	U	40.0	49.9		ug/L		125	33 - 132
1,1-Dichloroethane	4.0	U	40.0	46.3		ug/L		116	79 - 116
1,2-Dichloroethane	4.0	U	40.0	43.8		ug/L		109	68 - 129
1,1-Dichloroethene	4.0	U	40.0	45.0		ug/L		113	74 - 135
1,2-Dichloropropane	4.0	U	40.0	43.8		ug/L		109	78 - 115
cis-1,3-Dichloropropene	4.0	U	40.0	35.4		ug/L		89	51 - 110
trans-1,3-Dichloropropene	4.0	U	40.0	37.4		ug/L		93	46 - 116
Ethylbenzene	4.0	U	40.0	43.2		ug/L		108	75 - 116
2-Hexanone	40	U *	80.0	113	F1	ug/L		142	47 - 139
Methylene Chloride	20	U	40.0	40.4		ug/L		101	63 - 128
4-Methyl-2-pentanone (MIBK)	40	U	80.0	105		ug/L		131	56 - 131
Styrene	4.0	U	40.0	38.7		ug/L		97	71 - 117
1,1,2,2-Tetrachloroethane	4.0	U	40.0	44.2		ug/L		110	63 - 122
Tetrachloroethene	4.0	U	40.0	45.5		ug/L		114	70 - 117
Toluene	4.0	U	40.0	42.6		ug/L		107	78 - 114
Trichloroethene	4.0	U	40.0	44.8		ug/L		112	66 - 120
Vinyl chloride	4.0	U	40.0	53.9	F1	ug/L		135	49 - 130
Xylenes, Total	8.0	U	80.0	86.3		ug/L		108	76 - 116
1,1,1-Trichloroethane	4.0	U	40.0	41.7		ug/L		104	68 - 121
1,1,2-Trichloroethane	4.0	U	40.0	42.8		ug/L		107	75 - 115
Cyclohexane	4.0	U	40.0	46.5		ug/L		116	49 - 123
1,2-Dibromo-3-Chloropropane	4.0	U	40.0	42.7		ug/L		107	32 - 139
1,2-Dibromoethane	4.0	U	40.0	45.3		ug/L		113	74 - 113
Dichlorodifluoromethane	4.0	U	40.0	45.4		ug/L		114	17 - 128
cis-1,2-Dichloroethene	4.0	U	40.0	45.2		ug/L		113	70 - 120
trans-1,2-Dichloroethene	4.0	U	40.0	47.4		ug/L		118	80 - 119
Isopropylbenzene	4.0	U	40.0	43.0		ug/L		107	68 - 116
Methyl acetate	40	U	200	258		ug/L		129	47 - 130
Methyl tert-butyl ether	4.0	U	40.0	43.3		ug/L		108	46 - 144
1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U	40.0	51.1		ug/L		128	70 - 152
1,2,4-Trichlorobenzene	4.0	U	40.0	39.3		ug/L		98	38 - 138
1,2-Dichlorobenzene	4.4		40.0	46.6		ug/L		105	75 - 111
1,3-Dichlorobenzene	4.0	U	40.0	44.1		ug/L		101	73 - 110
1,4-Dichlorobenzene	10		40.0	49.2		ug/L		97	75 - 110
Trichlorofluoromethane	4.0	U	40.0	45.4		ug/L		114	46 - 157
Dibromochloromethane	4.0	U	40.0	39.1		ug/L		98	56 - 118

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-33801-5 MS

Matrix: Water

Analysis Batch: 119106

Client Sample ID: GW-18224-013114-SR-005

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylcyclohexane	4.0	U	40.0	44.2		ug/L		111	49 - 127
Surrogate	%Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	91		63 - 129						
4-Bromofluorobenzene (Surr)	99		66 - 117						
Toluene-d8 (Surr)	93		74 - 115						
Dibromofluoromethane (Surr)	99		75 - 121						

Lab Sample ID: 240-33801-5 MSD

Matrix: Water

Analysis Batch: 119106

Client Sample ID: GW-18224-013114-SR-005

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	40	U *	80.0	116	F1	ug/L		146	33 - 145	2	30
Benzene	4.0	U	40.0	46.1		ug/L		113	72 - 121	4	30
Bromodichloromethane	4.0	U	40.0	45.1		ug/L		113	67 - 120	3	30
Bromoform	4.0	U	40.0	39.3		ug/L		98	32 - 128	4	30
Bromomethane	4.0	U	40.0	48.9		ug/L		122	10 - 186	11	30
2-Butanone (MEK)	40	U *	80.0	105	F1	ug/L		131	54 - 129	5	30
Carbon disulfide	20	U	40.0	50.9		ug/L		120	57 - 147	3	30
Carbon tetrachloride	4.0	U	40.0	44.6		ug/L		112	59 - 129	1	30
Chlorobenzene	51		40.0	94.0		ug/L		107	80 - 110	1	30
Chloroethane	4.0	U	40.0	49.0		ug/L		122	21 - 165	5	30
Chloroform	4.0	U	40.0	47.2		ug/L		113	76 - 118	1	30
Chloromethane	4.0	U	40.0	51.8		ug/L		129	33 - 132	4	30
1,1-Dichloroethane	4.0	U	40.0	47.1	F1	ug/L		118	79 - 116	2	30
1,2-Dichloroethane	4.0	U	40.0	44.7		ug/L		112	68 - 129	2	30
1,1-Dichloroethene	4.0	U	40.0	45.3		ug/L		113	74 - 135	1	30
1,2-Dichloropropane	4.0	U	40.0	46.2	F1	ug/L		116	78 - 115	5	30
cis-1,3-Dichloropropene	4.0	U	40.0	36.9		ug/L		92	51 - 110	4	30
trans-1,3-Dichloropropene	4.0	U	40.0	38.3		ug/L		96	46 - 116	2	30
Ethylbenzene	4.0	U	40.0	43.6		ug/L		109	75 - 116	1	30
2-Hexanone	40	U *	80.0	116	F1	ug/L		146	47 - 139	3	30
Methylene Chloride	20	U	40.0	40.7		ug/L		102	63 - 128	1	30
4-Methyl-2-pentanone (MIBK)	40	U	80.0	111	F1	ug/L		139	56 - 131	6	30
Styrene	4.0	U	40.0	38.8		ug/L		97	71 - 117	0	30
1,1,2,2-Tetrachloroethane	4.0	U	40.0	44.3		ug/L		111	63 - 122	0	30
Tetrachloroethene	4.0	U	40.0	45.7		ug/L		114	70 - 117	1	30
Toluene	4.0	U	40.0	43.2		ug/L		108	78 - 114	1	30
Trichloroethene	4.0	U	40.0	44.3		ug/L		111	66 - 120	1	30
Vinyl chloride	4.0	U	40.0	54.6	F1	ug/L		136	49 - 130	1	30
Xylenes, Total	8.0	U	80.0	87.1		ug/L		109	76 - 116	1	30
1,1,1-Trichloroethane	4.0	U	40.0	42.1		ug/L		105	68 - 121	1	30
1,1,2-Trichloroethane	4.0	U	40.0	42.5		ug/L		106	75 - 115	1	30
Cyclohexane	4.0	U	40.0	46.4		ug/L		116	49 - 123	0	30
1,2-Dibromo-3-Chloropropane	4.0	U	40.0	48.1		ug/L		120	32 - 139	12	30
1,2-Dibromoethane	4.0	U	40.0	45.8	F1	ug/L		115	74 - 113	1	30
Dichlorodifluoromethane	4.0	U	40.0	45.7		ug/L		114	17 - 128	1	30

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 240-33801-5 MSD

Matrix: Water

Analysis Batch: 119106

Client Sample ID: GW-18224-013114-SR-005

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
cis-1,2-Dichloroethene	4.0	U	40.0	45.8		ug/L		115	70 - 120	1	30
trans-1,2-Dichloroethene	4.0	U	40.0	47.0		ug/L		117	80 - 119	1	30
Isopropylbenzene	4.0	U	40.0	43.9		ug/L		110	68 - 116	2	30
Methyl acetate	40	U	200	268	F1	ug/L		134	47 - 130	4	30
Methyl tert-butyl ether	4.0	U	40.0	44.6		ug/L		112	46 - 144	3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U	40.0	50.1		ug/L		125	70 - 152	2	30
1,2,4-Trichlorobenzene	4.0	U	40.0	41.3		ug/L		103	38 - 138	5	30
1,2-Dichlorobenzene	4.4		40.0	46.6		ug/L		106	75 - 111	0	30
1,3-Dichlorobenzene	4.0	U	40.0	44.8		ug/L		102	73 - 110	2	30
1,4-Dichlorobenzene	10		40.0	50.9		ug/L		101	75 - 110	3	30
Trichlorofluoromethane	4.0	U	40.0	43.8		ug/L		109	46 - 157	4	30
Dibromochloromethane	4.0	U	40.0	38.7		ug/L		97	56 - 118	1	30
Methylcyclohexane	4.0	U	40.0	42.9		ug/L		107	49 - 127	3	30

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	93		63 - 129
4-Bromofluorobenzene (Surr)	101		66 - 117
Toluene-d8 (Surr)	94		74 - 115
Dibromofluoromethane (Surr)	96		75 - 121

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Lab Sample ID: MB 240-118478/12-A

Matrix: Water

Analysis Batch: 118734

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118478

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,1'-Biphenyl	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2,2'-oxybis[1-chloropropane]	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2,4,5-Trichlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2,4,6-Trichlorophenol	4.0	U	4.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2,4-Dichlorophenol	10	U	10	ug/L		02/04/14 08:27	02/06/14 10:53	1
2,4-Dimethylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2,4-Dinitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 10:53	1
2,4-Dinitrotoluene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2,6-Dinitrotoluene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2-Chloronaphthalene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2-Chlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2-Methylnaphthalene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2-Methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
2-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 10:53	1
2-Nitrophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
3,3'-Dichlorobenzidine	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
3-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 10:53	1
4,6-Dinitro-2-methylphenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 10:53	1
4-Bromophenyl phenyl ether	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
4-Chloro-3-methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Lab Sample ID: MB 240-118478/12-A

Matrix: Water

Analysis Batch: 118734

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118478

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
4-Chloroaniline	10	U	10	ug/L		02/04/14 08:27	02/06/14 10:53	1
4-Chlorophenyl phenyl ether	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
4-Nitroaniline	20	U	20	ug/L		02/04/14 08:27	02/06/14 10:53	1
4-Nitrophenol	20	U	20	ug/L		02/04/14 08:27	02/06/14 10:53	1
Acenaphthene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Acenaphthylene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Acetophenone	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Anthracene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Atrazine	3.0	U	3.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Benzaldehyde	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Benzo[a]anthracene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Benzo[a]pyrene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Benzo[b]fluoranthene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Benzo[g,h,i]perylene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Benzo[k]fluoranthene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Bis(2-chloroethoxy)methane	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Bis(2-chloroethyl)ether	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Bis(2-ethylhexyl) phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Butyl benzyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Caprolactam	10	U	10	ug/L		02/04/14 08:27	02/06/14 10:53	1
Carbazole	10	U	10	ug/L		02/04/14 08:27	02/06/14 10:53	1
Chrysene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Dibenz(a,h)anthracene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Dibenzofuran	4.0	U	4.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Diethyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Dimethyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Di-n-butyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Di-n-octyl phthalate	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Fluoranthene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Fluorene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Hexachlorobenzene	0.20	U	0.20	ug/L		02/04/14 08:27	02/06/14 10:53	1
Hexachlorobutadiene	1.0	U	1.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Hexachlorocyclopentadiene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Hexachloroethane	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Indeno[1,2,3-cd]pyrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Isophorone	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Naphthalene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Nitrobenzene	3.0	U	3.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
N-Nitrosodi-n-propylamine	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
N-Nitrosodiphenylamine	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Pentachlorophenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Phenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Phenanthrene	2.0	U	2.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
Pyrene	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1
3 & 4 Methylphenol	5.0	U	5.0	ug/L		02/04/14 08:27	02/06/14 10:53	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl (Surr)	75		20 - 110	02/04/14 08:27	02/06/14 10:53	1

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Lab Sample ID: MB 240-118478/12-A

Matrix: Water

Analysis Batch: 118734

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 118478

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorophenol (Surr)	70		10 - 110	02/04/14 08:27	02/06/14 10:53	1
2,4,6-Tribromophenol (Surr)	68		21 - 110	02/04/14 08:27	02/06/14 10:53	1
Nitrobenzene-d5 (Surr)	72		21 - 110	02/04/14 08:27	02/06/14 10:53	1
Phenol-d5 (Surr)	73		21 - 110	02/04/14 08:27	02/06/14 10:53	1
Terphenyl-d14 (Surr)	94		24 - 110	02/04/14 08:27	02/06/14 10:53	1

Lab Sample ID: LCS 240-118478/13-A

Matrix: Water

Analysis Batch: 118734

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2'-oxybis[1-chloropropane]	20.0	14.6		ug/L		73	37 - 110
2,4,5-Trichlorophenol	20.0	15.4		ug/L		77	48 - 110
2,4,6-Trichlorophenol	20.0	15.2		ug/L		76	45 - 110
2,4-Dichlorophenol	20.0	14.8		ug/L		74	41 - 110
2,4-Dimethylphenol	20.0	14.8		ug/L		74	32 - 110
2,4-Dinitrophenol	40.0	20	U	ug/L		48	10 - 110
2,4-Dinitrotoluene	20.0	16.8		ug/L		84	53 - 110
2,6-Dinitrotoluene	20.0	16.6		ug/L		83	54 - 110
2-Chloronaphthalene	20.0	14.7		ug/L		73	43 - 110
2-Chlorophenol	20.0	14.6		ug/L		73	29 - 110
2-Methylnaphthalene	20.0	14.8		ug/L		74	45 - 110
2-Methylphenol	20.0	14.1		ug/L		70	42 - 110
2-Nitroaniline	20.0	20	U	ug/L		75	54 - 110
2-Nitrophenol	20.0	14.9		ug/L		74	40 - 110
3,3'-Dichlorobenzidine	40.0	24.3		ug/L		61	22 - 110
3-Nitroaniline	20.0	20	U	ug/L		80	53 - 110
4,6-Dinitro-2-methylphenol	40.0	29.3		ug/L		73	31 - 110
4-Bromophenyl phenyl ether	20.0	15.9		ug/L		79	45 - 110
4-Chloro-3-methylphenol	20.0	15.2		ug/L		76	52 - 110
4-Chloroaniline	20.0	15.2		ug/L		76	44 - 110
4-Chlorophenyl phenyl ether	20.0	15.5		ug/L		78	47 - 110
4-Nitroaniline	20.0	20	U	ug/L		78	54 - 110
4-Nitrophenol	40.0	32.7		ug/L		82	33 - 112
Acenaphthene	20.0	15.2		ug/L		76	47 - 110
Acenaphthylene	20.0	14.1		ug/L		71	49 - 110
Acetophenone	20.0	15.1		ug/L		76	46 - 110
Anthracene	20.0	15.6		ug/L		78	52 - 110
Atrazine	40.0	35.0		ug/L		88	66 - 126
Benzaldehyde	40.0	28.9		ug/L		72	38 - 110
Benzo[a]anthracene	20.0	14.9		ug/L		74	52 - 110
Benzo[a]pyrene	20.0	14.1		ug/L		70	44 - 110
Benzo[b]fluoranthene	20.0	14.9		ug/L		74	48 - 110
Benzo[g,h,i]perylene	20.0	15.0		ug/L		75	50 - 110
Benzo[k]fluoranthene	20.0	17.1		ug/L		85	49 - 110
Bis(2-chloroethoxy)methane	20.0	15.2		ug/L		76	43 - 110
Bis(2-chloroethyl)ether	20.0	14.9		ug/L		75	40 - 110

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Lab Sample ID: LCS 240-118478/13-A

Matrix: Water

Analysis Batch: 118734

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 118478

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-ethylhexyl) phthalate	20.0	13.9		ug/L		69	39 - 116
Butyl benzyl phthalate	20.0	14.7		ug/L		74	55 - 110
Caprolactam	40.0	29.4		ug/L		73	45 - 111
Carbazole	20.0	15.9		ug/L		80	55 - 110
Chrysene	20.0	15.1		ug/L		75	55 - 110
Dibenz(a,h)anthracene	20.0	15.0		ug/L		75	49 - 110
Dibenzofuran	20.0	15.0		ug/L		75	51 - 110
Diethyl phthalate	20.0	16.4		ug/L		82	58 - 110
Dimethyl phthalate	20.0	16.0		ug/L		80	57 - 110
Di-n-butyl phthalate	20.0	16.9		ug/L		84	57 - 110
Di-n-octyl phthalate	20.0	12.9		ug/L		64	40 - 110
Fluoranthene	20.0	16.1		ug/L		81	54 - 110
Fluorene	20.0	15.3		ug/L		77	52 - 110
Hexachlorobenzene	20.0	15.5		ug/L		78	50 - 110
Hexachlorobutadiene	20.0	12.8		ug/L		64	33 - 110
Hexachlorocyclopentadiene	20.0	5.0	U	ug/L		19	4 - 110
Hexachloroethane	20.0	12.2		ug/L		61	35 - 110
Indeno[1,2,3-cd]pyrene	20.0	14.9		ug/L		74	50 - 110
Isophorone	20.0	14.7		ug/L		73	49 - 110
Naphthalene	20.0	14.5		ug/L		72	44 - 110
Nitrobenzene	20.0	15.3		ug/L		77	42 - 110
N-Nitrosodi-n-propylamine	20.0	15.3		ug/L		76	47 - 110
N-Nitrosodiphenylamine	40.0	31.0		ug/L		78	50 - 110
Pentachlorophenol	40.0	29.6		ug/L		74	18 - 110
Phenol	20.0	14.5		ug/L		73	33 - 110
Phenanthrene	20.0	15.2		ug/L		76	53 - 110
Pyrene	20.0	15.3		ug/L		76	52 - 110
3 & 4 Methylphenol	20.0	14.8		ug/L		74	44 - 110

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	74		20 - 110
2-Fluorophenol (Surr)	65		10 - 110
2,4,6-Tribromophenol (Surr)	76		21 - 110
Nitrobenzene-d5 (Surr)	71		21 - 110
Phenol-d5 (Surr)	69		21 - 110
Terphenyl-d14 (Surr)	87		24 - 110

Lab Sample ID: 240-33801-5 MS

Matrix: Water

Analysis Batch: 118734

Client Sample ID: GW-18224-013114-SR-005

Prep Type: Total/NA

Prep Batch: 118478

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
				Result	Qualifier				
1,1'-Biphenyl	5.0	U	20.0	13.8		ug/L		69	34 - 110
2,2'-oxybis[1-chloropropane]	5.0	U	20.0	14.3		ug/L		72	10 - 145
2,4,5-Trichlorophenol	5.0	U	20.0	15.6		ug/L		78	36 - 110
2,4,6-Trichlorophenol	4.0	U	20.0	15.0		ug/L		75	33 - 110
2,4-Dichlorophenol	9.9	U	20.0	15.2		ug/L		76	28 - 110
2,4-Dimethylphenol	5.0	U	20.0	18.1		ug/L		91	15 - 110

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Lab Sample ID: 240-33801-5 MS

Matrix: Water

Analysis Batch: 118734

Client Sample ID: GW-18224-013114-SR-005

Prep Type: Total/NA

Prep Batch: 118478

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
2,4-Dinitrophenol	20	U	40.0	31.5		ug/L		79	10 - 124
2,4-Dinitrotoluene	5.0	U	20.0	16.6		ug/L		83	37 - 110
2,6-Dinitrotoluene	5.0	U	20.0	16.1		ug/L		81	38 - 110
2-Chloronaphthalene	5.0	U	20.0	14.1		ug/L		69	28 - 110
2-Chlorophenol	5.0	U	20.0	14.6		ug/L		73	20 - 110
2-Methylnaphthalene	5.0	U	20.0	14.1		ug/L		71	32 - 110
2-Methylphenol	5.0	U	20.0	15.0		ug/L		75	27 - 110
2-Nitroaniline	20	U	20.0	20	U	ug/L		75	38 - 110
2-Nitrophenol	5.0	U	20.0	14.1		ug/L		70	26 - 110
3,3'-Dichlorobenzidine	0.99	U	40.0	1.0	U F1	ug/L		0	10 - 110
3-Nitroaniline	20	U	20.0	20	U	ug/L		60	22 - 110
4,6-Dinitro-2-methylphenol	20	U	40.0	33.3		ug/L		83	10 - 110
4-Bromophenyl phenyl ether	5.0	U	20.0	13.4		ug/L		67	26 - 110
4-Chloro-3-methylphenol	5.0	U	20.0	15.7		ug/L		79	38 - 110
4-Chloroaniline	9.9	U	20.0	12.4		ug/L		62	15 - 110
4-Chlorophenyl phenyl ether	5.0	U	20.0	14.3		ug/L		71	30 - 110
4-Nitroaniline	20	U	20.0	20	U	ug/L		72	18 - 110
4-Nitrophenol	20	U	40.0	35.9		ug/L		90	16 - 111
Acenaphthene	5.0	U	20.0	14.2		ug/L		71	35 - 110
Acenaphthylene	5.0	U	20.0	11.9		ug/L		58	33 - 110
Acetophenone	5.0	U	20.0	14.7		ug/L		73	10 - 155
Anthracene	5.0	U	20.0	12.6		ug/L		63	26 - 110
Atrazine	3.0	U	40.0	33.3		ug/L		83	40 - 124
Benzaldehyde	5.0	U	40.0	29.4		ug/L		73	24 - 110
Benzo[a]anthracene	0.99	U	20.0	5.40		ug/L		27	16 - 110
Benzo[a]pyrene	0.99	U	20.0	3.80		ug/L		19	10 - 110
Benzo[b]fluoranthene	0.99	U	20.0	3.71		ug/L		19	10 - 110
Benzo[g,h,i]perylene	0.99	U	20.0	3.78		ug/L		19	10 - 110
Benzo[k]fluoranthene	0.99	U	20.0	4.18		ug/L		21	10 - 110
Bis(2-chloroethoxy)methane	5.0	U	20.0	14.8		ug/L		74	27 - 110
Bis(2-chloroethyl)ether	0.99	U	20.0	14.6		ug/L		73	24 - 110
Bis(2-ethylhexyl) phthalate	5.0	U	20.0	5.0	U	ug/L		23	10 - 112
Butyl benzyl phthalate	5.0	U	20.0	12.0		ug/L		60	31 - 110
Caprolactam	9.9	U	40.0	31.8		ug/L		80	10 - 199
Carbazole	9.9	U	20.0	15.6		ug/L		78	28 - 110
Chrysene	0.99	U	20.0	5.35		ug/L		27	17 - 110
Dibenz(a,h)anthracene	2.0	U	20.0	3.94		ug/L		20	10 - 111
Dibenzofuran	4.0	U	20.0	14.3		ug/L		71	36 - 110
Diethyl phthalate	5.0	U	20.0	17.1		ug/L		86	42 - 110
Dimethyl phthalate	5.0	U	20.0	15.8		ug/L		79	42 - 110
Di-n-butyl phthalate	5.0	U	20.0	13.9		ug/L		69	35 - 110
Di-n-octyl phthalate	5.0	U	20.0	5.0	U	ug/L		19	10 - 118
Fluoranthene	0.99	U	20.0	11.6		ug/L		58	31 - 110
Fluorene	5.0	U	20.0	14.8		ug/L		74	36 - 110
Hexachlorobenzene	0.20	U	20.0	9.08		ug/L		45	23 - 110
Hexachlorobutadiene	0.99	U	20.0	12.2		ug/L		61	15 - 110
Hexachlorocyclopentadiene	5.0	U	20.0	7.65		ug/L		38	4 - 110
Hexachloroethane	5.0	U	20.0	12.0		ug/L		60	10 - 122

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Lab Sample ID: 240-33801-5 MS

Matrix: Water

Analysis Batch: 118734

Client Sample ID: GW-18224-013114-SR-005

Prep Type: Total/NA

Prep Batch: 118478

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Indeno[1,2,3-cd]pyrene	2.0	U	20.0	3.78		ug/L		19	10 - 110
Isophorone	5.0	U	20.0	14.4		ug/L		72	33 - 110
Naphthalene	5.0	U	20.0	13.9		ug/L		69	28 - 110
Nitrobenzene	3.0	U	20.0	14.5		ug/L		72	15 - 110
N-Nitrosodi-n-propylamine	5.0	U	20.0	15.1		ug/L		75	32 - 110
N-Nitrosodiphenylamine	5.0	U	40.0	25.1		ug/L		63	10 - 110
Pentachlorophenol	5.0	U	40.0	33.9		ug/L		85	10 - 123
Phenol	5.0	U	20.0	14.4		ug/L		72	25 - 110
Phenanthrene	2.0	U	20.0	13.7		ug/L		69	34 - 110
Pyrene	5.0	U	20.0	10.5		ug/L		52	32 - 110
3 & 4 Methylphenol	5.0	U	20.0	15.2		ug/L		76	31 - 110

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	68		20 - 110
2-Fluorophenol (Surr)	67		10 - 110
2,4,6-Tribromophenol (Surr)	80		21 - 110
Nitrobenzene-d5 (Surr)	70		21 - 110
Phenol-d5 (Surr)	72		21 - 110
Terphenyl-d14 (Surr)	42		24 - 110

Lab Sample ID: 240-33801-5 MSD

Matrix: Water

Analysis Batch: 118734

Client Sample ID: GW-18224-013114-SR-005

Prep Type: Total/NA

Prep Batch: 118478

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
1,1'-Biphenyl	5.0	U	19.0	13.9		ug/L		73	34 - 110	1	31
2,2'-oxybis[1-chloropropane]	5.0	U	19.0	14.7		ug/L		77	10 - 145	3	43
2,4,5-Trichlorophenol	5.0	U	19.0	15.5		ug/L		81	36 - 110	1	60
2,4,6-Trichlorophenol	4.0	U	19.0	15.3		ug/L		81	33 - 110	2	63
2,4-Dichlorophenol	9.9	U	19.0	15.4		ug/L		81	28 - 110	2	69
2,4-Dimethylphenol	5.0	U	19.0	18.4		ug/L		97	15 - 110	2	36
2,4-Dinitrophenol	20	U	38.1	30.7		ug/L		80	10 - 124	3	70
2,4-Dinitrotoluene	5.0	U	19.0	16.6		ug/L		87	37 - 110	0	56
2,6-Dinitrotoluene	5.0	U	19.0	16.0		ug/L		84	38 - 110	1	54
2-Chloronaphthalene	5.0	U	19.0	14.4		ug/L		73	28 - 110	2	37
2-Chlorophenol	5.0	U	19.0	15.1		ug/L		79	20 - 110	3	70
2-Methylnaphthalene	5.0	U	19.0	13.9		ug/L		73	32 - 110	2	33
2-Methylphenol	5.0	U	19.0	15.3		ug/L		80	27 - 110	2	42
2-Nitroaniline	20	U	19.0	19	U	ug/L		81	38 - 110	2	32
2-Nitrophenol	5.0	U	19.0	14.9		ug/L		78	26 - 110	6	64
3,3'-Dichlorobenzidine	0.99	U	38.1	0.95	U F1	ug/L		0	10 - 110	NC	99
3-Nitroaniline	20	U	19.0	19	U	ug/L		65	22 - 110	3	69
4,6-Dinitro-2-methylphenol	20	U	38.1	32.4		ug/L		85	10 - 110	3	93
4-Bromophenyl phenyl ether	5.0	U	19.0	12.7		ug/L		66	26 - 110	5	35
4-Chloro-3-methylphenol	5.0	U	19.0	15.7		ug/L		82	38 - 110	0	35
4-Chloroaniline	9.9	U	19.0	11.9		ug/L		62	15 - 110	4	73
4-Chlorophenyl phenyl ether	5.0	U	19.0	13.7		ug/L		72	30 - 110	4	36
4-Nitroaniline	20	U	19.0	19	U	ug/L		75	18 - 110	1	60

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Lab Sample ID: 240-33801-5 MSD

Client Sample ID: GW-18224-013114-SR-005

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 118734

Prep Batch: 118478

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
4-Nitrophenol	20	U	38.1	35.0		ug/L		92	16 - 111	3	65
Acenaphthene	5.0	U	19.0	14.2		ug/L		74	35 - 110	0	30
Acenaphthylene	5.0	U	19.0	12.3		ug/L		64	33 - 110	4	30
Acetophenone	5.0	U	19.0	15.3		ug/L		80	10 - 155	4	31
Anthracene	5.0	U	19.0	12.3		ug/L		64	26 - 110	2	37
Atrazine	3.0	U	38.1	32.0		ug/L		84	40 - 124	4	30
Benzaldehyde	5.0	U	38.1	29.5		ug/L		77	24 - 110	0	34
Benzo[a]anthracene	0.99	U	19.0	3.26	F2	ug/L		17	16 - 110	50	30
Benzo[a]pyrene	0.99	U	19.0	1.31	F1 F2	ug/L		7	10 - 110	97	60
Benzo[b]fluoranthene	0.99	U	19.0	1.46	F1 F2	ug/L		8	10 - 110	87	45
Benzo[g,h,i]perylene	0.99	U	19.0	0.995	F1 F2	ug/L		5	10 - 110	117	60
Benzo[k]fluoranthene	0.99	U	19.0	1.13	F1 F2	ug/L		6	10 - 110	115	48
Bis(2-chloroethoxy)methane	5.0	U	19.0	15.1		ug/L		79	27 - 110	2	33
Bis(2-chloroethyl)ether	0.99	U	19.0	15.2		ug/L		80	24 - 110	4	42
Bis(2-ethylhexyl) phthalate	5.0	U	19.0	4.8	U F1 F2	ug/L		9	10 - 112	95	71
Butyl benzyl phthalate	5.0	U	19.0	10.9		ug/L		57	31 - 110	10	37
Caprolactam	9.9	U	38.1	30.2		ug/L		79	10 - 199	5	99
Carbazole	9.9	U	19.0	15.3		ug/L		80	28 - 110	2	30
Chrysene	0.99	U	19.0	3.04	F1 F2	ug/L		16	17 - 110	55	30
Dibenz(a,h)anthracene	2.0	U	19.0	1.9	U F1 F2	ug/L		5	10 - 111	118	63
Dibenzofuran	4.0	U	19.0	14.2		ug/L		75	36 - 110	1	30
Diethyl phthalate	5.0	U	19.0	16.7		ug/L		88	42 - 110	2	30
Dimethyl phthalate	5.0	U	19.0	15.9		ug/L		84	42 - 110	1	30
Di-n-butyl phthalate	5.0	U	19.0	12.9		ug/L		67	35 - 110	8	37
Di-n-octyl phthalate	5.0	U	19.0	4.8	U F1 F2	ug/L		5	10 - 118	120	92
Fluoranthene	0.99	U	19.0	10.4		ug/L		54	31 - 110	11	30
Fluorene	5.0	U	19.0	14.4		ug/L		76	36 - 110	3	30
Hexachlorobenzene	0.20	U	19.0	7.82		ug/L		41	23 - 110	15	30
Hexachlorobutadiene	0.99	U	19.0	11.7		ug/L		62	15 - 110	4	49
Hexachlorocyclopentadiene	5.0	U	19.0	7.06		ug/L		37	4 - 110	8	99
Hexachloroethane	5.0	U	19.0	11.9		ug/L		62	10 - 122	1	44
Indeno[1,2,3-cd]pyrene	2.0	U	19.0	1.9	U F1 F2	ug/L		5	10 - 110	120	58
Isophorone	5.0	U	19.0	14.6		ug/L		77	33 - 110	1	31
Naphthalene	5.0	U	19.0	13.7		ug/L		72	28 - 110	1	80
Nitrobenzene	3.0	U	19.0	15.1		ug/L		79	15 - 110	4	34
N-Nitrosodi-n-propylamine	5.0	U	19.0	15.3		ug/L		80	32 - 110	1	32
N-Nitrosodiphenylamine	5.0	U	38.1	26.2		ug/L		69	10 - 110	5	38
Pentachlorophenol	5.0	U	38.1	33.4		ug/L		88	10 - 123	1	76
Phenol	5.0	U	19.0	14.9		ug/L		78	25 - 110	3	74
Phenanthrene	2.0	U	19.0	13.0		ug/L		68	34 - 110	6	30
Pyrene	5.0	U	19.0	9.60		ug/L		50	32 - 110	9	30
3 & 4 Methylphenol	5.0	U	19.0	15.3		ug/L		80	31 - 110	1	42

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	71		20 - 110
2-Fluorophenol (Surr)	72		10 - 110
2,4,6-Tribromophenol (Surr)	82		21 - 110
Nitrobenzene-d5 (Surr)	74		21 - 110

TestAmerica Canton

QC Sample Results

Client: Conestoga-Rovers & Associates, Inc.
Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2) (Continued)

Lab Sample ID: 240-33801-5 MSD
Matrix: Water
Analysis Batch: 118734

Client Sample ID: GW-18224-013114-SR-005
Prep Type: Total/NA
Prep Batch: 118478

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Phenol-d5 (Surr)	76		21 - 110
Terphenyl-d14 (Surr)	32		24 - 110

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-118522/1-A
Matrix: Water
Analysis Batch: 118884

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 118522

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil	Fac
Chromium	5.0	U	5.0	ug/L		02/04/14 11:13	02/06/14 14:07		1
Lead	3.0	U	3.0	ug/L		02/04/14 11:13	02/06/14 14:07		1

Lab Sample ID: LCS 240-118522/2-A
Matrix: Water
Analysis Batch: 118884

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 118522

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	200	195		ug/L		98	80 - 120
Lead	500	486		ug/L		97	80 - 120

Lab Sample ID: 240-33801-5 MS
Matrix: Water
Analysis Batch: 118884

Client Sample ID: GW-18224-013114-SR-005
Prep Type: Total Recoverable
Prep Batch: 118522

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	11		200	210		ug/L		99	75 - 125
Lead	3.0	U	500	462		ug/L		92	75 - 125

Lab Sample ID: 240-33801-5 MSD
Matrix: Water
Analysis Batch: 118884

Client Sample ID: GW-18224-013114-SR-005
Prep Type: Total Recoverable
Prep Batch: 118522

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	11		200	204		ug/L		96	75 - 125	3	20
Lead	3.0	U	500	451		ug/L		90	75 - 125	2	20

Surrogate Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (63-129)	BFB (66-117)	TOL (74-115)	DBFM (75-121)
240-33801-1	GW-18224-013114-SR-001	89	87	86	95
240-33801-2	GW-18224-013114-SR-002	95	91	91	104
240-33801-3	GW-18224-013114-SR-003	90	86	87	95
240-33801-4	GW-18224-013114-SR-004	90	87	87	96
240-33801-5	GW-18224-013114-SR-005	90	85	86	95
240-33801-5 MS	GW-18224-013114-SR-005	91	99	93	99
240-33801-5 MSD	GW-18224-013114-SR-005	93	101	94	96
240-33801-6	GW-18224-013114-SR-006	95	94	89	100
240-33801-7	GW-18224-013114-SR-007	92	91	88	94
240-33801-8	TB-18224-013114	91	86	85	95
LCS 240-118932/4	Lab Control Sample	91	101	95	100
LCS 240-119106/4	Lab Control Sample	90	101	96	98
MB 240-118932/6	Method Blank	97	92	92	99
MB 240-119106/6	Method Blank	94	86	88	94

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 TOL = Toluene-d8 (Surr)
 DBFM = Dibromofluoromethane (Surr)

Method: 8270C - TCL Semivolatile Compounds (OLMO4.2)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (20-110)	2FP (10-110)	TBP (21-110)	NBZ (21-110)	PHL (21-110)	TPH (24-110)
240-33801-1	GW-18224-013114-SR-001	66	66	74	64	67	82
240-33801-2	GW-18224-013114-SR-002	65	63	72	64	66	83
240-33801-3	GW-18224-013114-SR-003	71	71	82	78	75	88
240-33801-4	GW-18224-013114-SR-004	65	61	81	62	67	29
240-33801-5	GW-18224-013114-SR-005	66	67	75	68	68	49
240-33801-5 MS	GW-18224-013114-SR-005	68	67	80	70	72	42
240-33801-5 MSD	GW-18224-013114-SR-005	71	72	82	74	76	32
240-33801-6	GW-18224-013114-SR-006	66	66	81	65	69	83
240-33801-7	GW-18224-013114-SR-007	75	73	83	65	72	86
LCS 240-118478/13-A	Lab Control Sample	74	65	76	71	69	87
MB 240-118478/12-A	Method Blank	75	70	68	72	73	94

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
 2FP = 2-Fluorophenol (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL = Phenol-d5 (Surr)
 TPH = Terphenyl-d14 (Surr)

TestAmerica Canton

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Client Sample ID: GW-18224-013114-SR-001

Lab Sample ID: 240-33801-1

Date Collected: 01/31/14 11:10

Matrix: Water

Date Received: 02/01/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		66.67	118932	02/07/14 14:09	LRW	TAL CAN
Total/NA	Prep	3520C			118478	02/04/14 08:27	SDE	TAL CAN
Total/NA	Analysis	8270C		1	118734	02/06/14 15:46	MRU	TAL CAN
Total Recoverable	Prep	3005A			118522	02/04/14 11:13	LPM	TAL CAN
Total Recoverable	Analysis	6010B		1	118884	02/06/14 14:32	KLC	TAL CAN

Client Sample ID: GW-18224-013114-SR-002

Lab Sample ID: 240-33801-2

Date Collected: 01/31/14 11:10

Matrix: Water

Date Received: 02/01/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		66.67	118932	02/07/14 14:32	LRW	TAL CAN
Total/NA	Prep	3520C			118478	02/04/14 08:27	SDE	TAL CAN
Total/NA	Analysis	8270C		1	118734	02/06/14 16:10	MRU	TAL CAN
Total Recoverable	Prep	3005A			118522	02/04/14 11:13	LPM	TAL CAN
Total Recoverable	Analysis	6010B		1	118884	02/06/14 14:44	KLC	TAL CAN

Client Sample ID: GW-18224-013114-SR-003

Lab Sample ID: 240-33801-3

Date Collected: 01/31/14 10:50

Matrix: Water

Date Received: 02/01/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	118932	02/07/14 14:55	LRW	TAL CAN
Total/NA	Prep	3520C			118478	02/04/14 08:27	SDE	TAL CAN
Total/NA	Analysis	8270C		1	118734	02/06/14 16:35	MRU	TAL CAN
Total Recoverable	Prep	3005A			118522	02/04/14 11:13	LPM	TAL CAN
Total Recoverable	Analysis	6010B		1	118884	02/06/14 14:49	KLC	TAL CAN

Client Sample ID: GW-18224-013114-SR-004

Lab Sample ID: 240-33801-4

Date Collected: 01/31/14 13:10

Matrix: Water

Date Received: 02/01/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		4	118932	02/07/14 15:17	LRW	TAL CAN
Total/NA	Prep	3520C			118478	02/04/14 08:27	SDE	TAL CAN
Total/NA	Analysis	8270C		1	118734	02/06/14 16:59	MRU	TAL CAN
Total Recoverable	Prep	3005A			118522	02/04/14 11:13	LPM	TAL CAN
Total Recoverable	Analysis	6010B		1	118884	02/06/14 14:53	KLC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Client Sample ID: GW-18224-013114-SR-005

Lab Sample ID: 240-33801-5

Date Collected: 01/31/14 13:45

Matrix: Water

Date Received: 02/01/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		4	119106	02/10/14 13:25	LRW	TAL CAN
Total/NA	Prep	3520C			118478	02/04/14 08:27	SDE	TAL CAN
Total/NA	Analysis	8270C		1	118734	02/06/14 17:48	MRU	TAL CAN
Total Recoverable	Prep	3005A			118522	02/04/14 11:13	LPM	TAL CAN
Total Recoverable	Analysis	6010B		1	118884	02/06/14 14:15	KLC	TAL CAN

Client Sample ID: GW-18224-013114-SR-006

Lab Sample ID: 240-33801-6

Date Collected: 01/31/14 15:50

Matrix: Water

Date Received: 02/01/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		6.67	118932	02/07/14 15:40	LRW	TAL CAN
Total/NA	Prep	3520C			118478	02/04/14 08:27	SDE	TAL CAN
Total/NA	Analysis	8270C		1	118734	02/06/14 17:24	MRU	TAL CAN
Total Recoverable	Prep	3005A			118522	02/04/14 11:13	LPM	TAL CAN
Total Recoverable	Analysis	6010B		1	118884	02/06/14 14:57	KLC	TAL CAN

Client Sample ID: GW-18224-013114-SR-007

Lab Sample ID: 240-33801-7

Date Collected: 01/31/14 15:15

Matrix: Water

Date Received: 02/01/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	118932	02/07/14 16:03	LRW	TAL CAN
Total/NA	Prep	3520C			118478	02/04/14 08:27	SDE	TAL CAN
Total/NA	Analysis	8270C		10	118734	02/06/14 19:02	MRU	TAL CAN
Total Recoverable	Prep	3005A			118522	02/04/14 11:13	LPM	TAL CAN
Total Recoverable	Analysis	6010B		1	118884	02/06/14 15:02	KLC	TAL CAN

Client Sample ID: TB-18224-013114

Lab Sample ID: 240-33801-8

Date Collected: 01/31/14 00:00

Matrix: Water

Date Received: 02/01/14 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	118932	02/07/14 16:25	LRW	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: Conestoga-Rovers & Associates, Inc.
 Project/Site: 18224, Arkema Halowax Area

TestAmerica Job ID: 240-33801-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14
Connecticut	State Program	1	PH-0590	12-31-14
Florida	NELAP	4	E87225	06-30-14
Georgia	State Program	4	N/A	06-30-14
Illinois	NELAP	5	200004	07-31-14 *
Kansas	NELAP	7	E-10336	04-01-14 *
Kentucky (UST)	State Program	4	58	06-30-14
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-14
Nevada	State Program	9	OH-000482008A	07-31-14
New Jersey	NELAP	2	OH001	06-30-14
New York	NELAP	2	10975	04-01-14
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-14 *
Texas	NELAP	6		08-31-14 *
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-14
Washington	State Program	10	C971	01-12-14 *
West Virginia DEP	State Program	3	210	02-28-14 *
Wisconsin	State Program	5	999518190	08-31-14

* Expired certification is currently pending renewal and is considered valid.



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS



240-33801 Chain of Custody





1.2.2.0.24
CONESTOGA-ROVERS
 & ASSOCIATES

CHAIN OF CUSTODY RECORD

14496 Sheldon Road, Suite #200, Plymouth, Michigan 48170
 Phone: (734) 453-5123 Fax: (734) 453-5201

COC NO.: **PL-13769**
 PAGE 1 OF 1
 (See Reverse Side for Instructions)

Project No/Phase/Task Code: 018224-03		Laboratory Name: Test America		Lab Location: W. Canton, OH		SSOW ID: 18224-007	
Project Name: Arkema Malabar Area		Lab Contact: D. Hecker		Lab Quote No:		Cooler No:	
Project Location: Wyandotte, MI		CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)			
Chemistry Contact: R. Fleisher		SAMPLE TYPE		Total Containers/Sample			
Sampler(s): D. Canfield / S. Roper		Matrix Code		Other:			
Item		DATE (mm/dd/yyyy)		TIME (hh:mm)		MS/MSD Request	
1 GW-18224-013114-SR-001		01/31/13		11:10			
2 -002				11:10			
3 -003				10:50			
4 -004				13:10			
5 -005				13:45			
6 -006				15:50			
7 -007				15:15			
8 TB-18224-013114							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							
55							
56							
57							
58							
59							
60							
61							
62							
63							
64							
65							
66							
67							
68							
69							
70							
71							
72							
73							
74							
75							
76							
77							
78							
79							
80							
81							
82							
83							
84							
85							
86							
87							
88							
89							
90							
91							
92							
93							
94							
95							
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
121							
122							
123							
124							
125							
126							
127							
128							
129							
130							
131							
132							
133							
134							
135							
136							
137							
138							
139							
140							
141							
142							
143							
144							
145							
146							
147							
148							
149							
150							
151							
152							
153							
154							
155							
156							
157							
158							
159							
160							
161							
162							
163							
164							
165							
166							
167							
168							
169							
170							
171							
172							
173							
174							
175							
176							
177							
178							
179							
180							
181							
182							
183							
184							
185							
186							
187							
188							
189							
190							
191							
192							
193							
194							
195							
196							
197							
198							
199							
200							
201							
202							
203							
204							
205							
206							
207							
208							
209							
210							
211							
212							
213							
214							
215							
216							
217							
218							
219							
220							
221							
222							
223							
224							
225							
226							
227							
228							
229							
230							
231							
232							
233							
234							
235							
236							
237							
238							
239							
240							
241							
242							
243							
244							
245							
246							
247							
248				</			

Canton Facility

Client CRA Site Name _____

Cooler unpacked by: _____

Cooler Received on 2-3-14 Opened on 2-3-14

FedEx: 1st Grd UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A (CF +0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

IR GUN# 4 (CF -1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

IR GUN# 5 (CF +1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

IR GUN# 8 (CF +1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No

-Were custody seals on the outside of the cooler(s) signed & dated? Yes No

-Were custody seals on the bottle(s)? Yes No

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Did all bottles arrive in good condition (Unbroken)? Yes No

7. Could all bottle labels be reconciled with the COC? Yes No

8. Were correct bottle(s) used for the test(s) indicated? Yes No

9. Sufficient quantity received to perform indicated analyses? Yes No

10. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC391902

11. Were VOAs on the COC? Yes No

12. Were air bubbles >6 mm in any VOA vials? Yes No NA

13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

Blank lines for Chain of Custody and Sample Discrepancies.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

Temperature readings:

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u> <u>pH</u>	<u>Preservative</u> <u>Added (mls)</u>	<u>Lot #</u>
GW-18224-013114-SR-001	240-33801-D-1	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-013114-SR-002	240-33801-D-2	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-013114-SR-003	240-33801-D-3	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-013114-SR-004	240-33801-D-4	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-013114-SR-005	240-33801-J-5	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-013114-SR-005	240-33801-K-5	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-013114-SR-006	240-33801-D-6	Plastic 500ml - with Nitric Acid	<2	_____	_____
GW-18224-013114-SR-007	240-33801-D-7	Plastic 500ml - with Nitric Acid	<2	_____	_____